

# EV-S1000E

## RMT-451

# SERVICE MANUAL

*AEP Model*  
*UK Model*



# Hi8

MECHANISM

## SPECIFICATIONS

For Mechanical ADJUSTMENTS, refer to the "8 mm Video MECHANICAL ADJUSTMENT MANUAL III" (9-972-732-11)

### System

Video recording system	Rotary two-head helical scanning FM system
Audio recording system (Normal recording)	<b>Standard:</b> Rotary head FM system (2 channels) <b>PCM:</b> PCM system (2 channels)
Colour system	<b>EV-S1000E:</b> DDR SECAM to PAL colour, convertible <b>EV-S1000E (UK):</b> CCIR system B, G, and H, PAL colour
Usable cassettes	8 mm video format cassette
Tape speed	<b>SP:</b> 20.051 mm/sec. <b>LP:</b> 10.058 mm/sec.
Maximum recording/playback time	<b>SP:</b> 1 hour 30 min. (with Sony E5/P5-90) <b>LP:</b> 3 hours (with Sony E5/P5-90)
Fast-forward/rewind time	Approx. 4 min. (with Sony E5/P5-90)

### PCM

Sampling frequency	31.25 kHz
Audio frequency	20 Hz to 15 kHz
Dynamic range	More than 90 dB
Wow and flutter	Less than 0.005 % RMS

### Tuner Section

Channel coverage	<b>EV-S1000E:</b> VHF E2 to E4, E5 to E12 UHF E21 to E69 Cable TV: channels S01 to S03, S1 to S20, S21 to S41 <b>EV-S1000E (UK):</b> UHF 321 to B68 60 programmes
Programming system	<b>EV-S1000E:</b> West German two-carrier system
Stereo/bilingual system	<b>EV-S1000E (UK):</b> NICAM
RF output signal	<b>EV-S1000E:</b> UHF channels E30 — E39 (variable) <b>EV-S1000E (UK):</b> UHF channels B30 — B39 (variable)
Aerial input	75 ohms, unbalanced 75-ohms asymmetric: aerial socket

— Continued on page 2 —

### • SERVICE OF REMOTE COMMANDER RMT-451

Remote commander RMT-451 is available as a unit. But as individual parts the battery cap lid of commander is only available.



# 8 VIDEO CASSETTE RECORDER

# SONY®

## Inputs and Outputs

<b>LINE IN 1/2</b>	<b>VIDEO:</b> Phono jack (1 each) 1 Vp-p, 75 ohms, unbalanced, sync negative <b>AUDIO:</b> Phono jack (2 each) 47 kilohms, – 7.5 dBs (0 dBs = 0.775 V rms) <b>S VIDEO:</b> 4-pin mini DIN (1 each) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced
<b>LINE OUT</b>	<b>VIDEO:</b> Phono jack (1) 1 Vp-p, 75 ohms, unbalanced, sync negative <b>AUDIO:</b> Phono jack (2 each) Output impedance less than 1 kilohms, – 7.5 dBs with 10 kilohms load unbalanced <b>S VIDEO:</b> 4-pin mini DIN (1) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced
<b>MONITOR OUT</b>	<b>EURO-AV:</b> 21-pin (1) Video out: pin 19 1 Vp-p, 75 ohms, unbalanced, sync negative (with change- over switch) Luminance signal: 1 - Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: PIN 15 0.30 Vp-p, 75 ohms, unbalanced PIN 21 S VIDEO/VIDEO: S VIDEO Audio out: pins 1 and 3 Output impedance Less than 1 kilohms, – 6dBs with 10 kilohms load, unbalanced <b>S VIDEO:</b> 4-pin, mini DIN (1) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced
<b>CONTROL L (LANC):</b>	Rear panel: 5-pin DIN (1) Front panel: stereo minimini-jack (1)

<b>HEADPHONES jack:</b>	Stereo minijack (1), – 20 dBs, 8 ohms
<b>MIC (microphone) input:</b>	Minijack (1) – 60 dBs, for low impedance microphone

## Timer Section

<b>Clock</b>	Crystal locked
<b>Command mode</b>	VTR 1/2/3
<b>Time indication</b>	24-hour cycle
<b>Timer setting</b>	Only for recording 6 programmes in one month at max.
<b>Timer back-up</b>	Built-in self-charging capacitor Back-up duration: Up to 1 hour at one time

## General

<b>Power requirements</b>	<b>EV-S1000E:</b> 220 V AC, 50 Hz <b>EV-S1000E (UK):</b> 240 V AC, 50 Hz
<b>Power consumption</b>	<b>EV-S1000E:</b> 28 W <b>EV-S1000E (UK):</b> 30 W
<b>Operating temperature</b>	5°C to 40°C (41°F to 104°F)
<b>Storage temperature</b>	– 20°C to 60°C (– 4°F to 140°F)
<b>Dimensions</b>	<b>EV-S1000E:</b> 470 x 105 x 305 mm (w/h/d) (18 5/8 x 4 1/4 x 12 1/8 inches) (including side woods) <b>EV-S1000E (UK):</b> 430 x 105 x 305 mm (w/h/d) (17 x 4 1/4 x 12 1/8 inches)
<b>Weight</b>	<b>EV-S1000E:</b> 6.5 kg (14 lb 5 oz) <b>EV-S1000E (UK):</b> 5.9 kg (13 lb)

## Wireless Commander RMT-451

<b>Remote control system</b>	Infrared control
<b>Power requirements</b>	3.0 V DC, two IEC designation R6 batteries
<b>Command mode</b>	VTR 1/VTR 2/VTR 3
<b>Dimensions</b>	Approx. 77 x 18 x 220 mm (w/h/d) (3 1/8 x 3/4 x 8 3/4 inches) including projecting parts and controls
<b>Weight</b>	170 g (5 oz) excluding batteries



## Accessories Supplied

Wireless Remote Commander RMT-451 with two R6 batteries	(1)
75-ohm coaxial cable	(1)
Audio connecting cable (2 phono to 2 phono)	(1)
Video connecting cable (phono to phono)	(1)
Video connecting cable for S VIDEO connector (4-pin DIN to 4-pin DIN)	(1)
Control cable (stereo minimini jack to stereo minimini jack)	(1)
Screwdriver	(1)
Cleaning cassette	(1)

Design and specifications are subject to change without notice.

### Note



This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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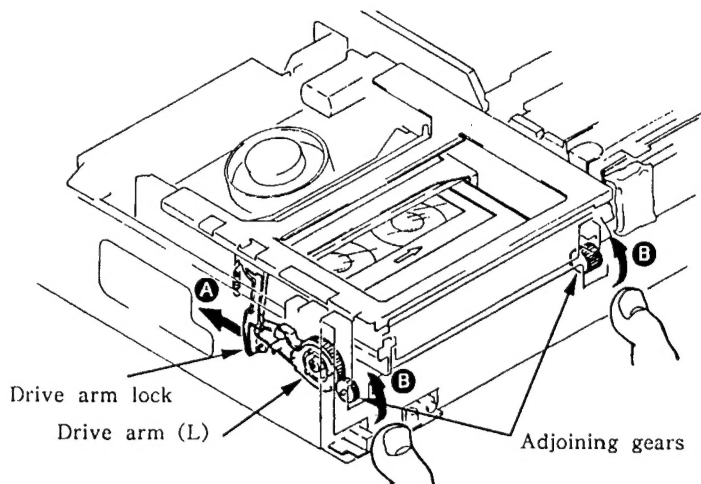
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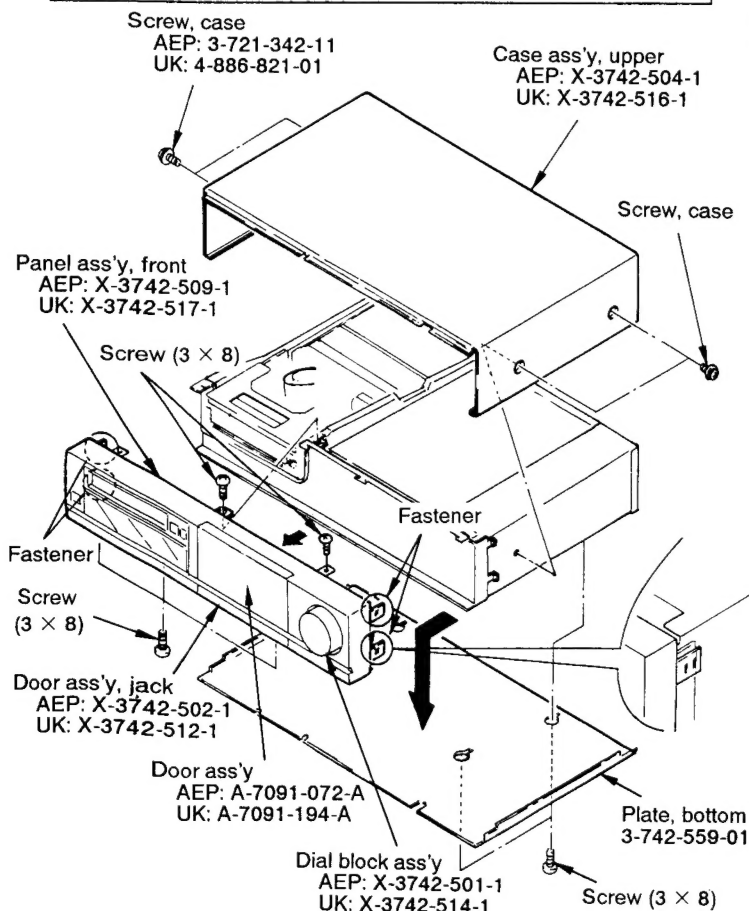
## SECTION 1 SERVICE NOTE

### 1-1. Ejecting a malfunctioning videocassette

- A. If the videocassette cannot be ejected because the videotape is still wrapped around the drum, remove the CM-15 board on the lower part of the mechanical section. Turn the capstan motor wheel in either direction and turn either the S or T reel to return the tape to the cassette. After the tape is back inside the cassette, proceed to step "B" if necessary.
- B. If the videotape is in the cassette half and cannot be ejected :
  - 1) Remove the front panel. Remove the drive arm lock (located between the L frame and the left part of the cassette control section) away from the drive arm (L) in the direction of the arrow **A**.
  - 2) Use both thumbs to turn the adjoining gears in the direction of arrow **B**.



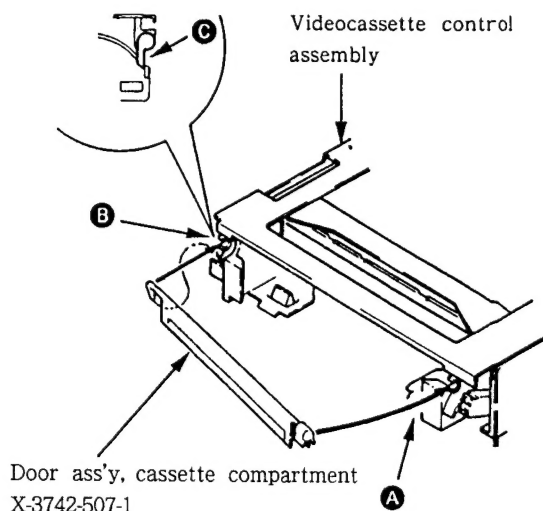
### 1-2. Replacing the external casing



Note: Remove the locks of the five fasteners, then remove the front panel.

### 1-3. Replacing the videocassette door assembly

- 1) Remove the front panel.
- 2) Remove the videocassette door assembly first from part **A**, then from part **B**.



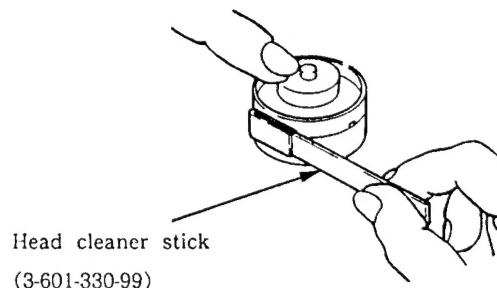
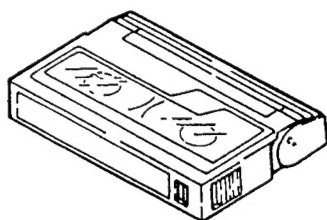
- 3) When reinstalling the videocassette door assembly, install at part **B** first. Install it on the fastener of part **C** as shown in the figure. Then install at part **A** with the door assembly lowered vertically.

## 1-4. Cleaning the video head and transport system

### Procedure 1

#### [Using a cleaning tape]

- Use the V8-25CLN cleaning tape. (Before using the cleaning tape, read the instructions carefully.)



#### [Cleaning the transport system]

- ① Apply the cleaning fluid to the head cleaner stick.
- ② Use the head cleaner stick to clean the tape guide, pinch roller, and other parts that come in direct contact with the tape.

### Procedure 2

#### [Using cleaning fluid]

- ① Remove the video deck's upper casing.
- ② Apply the cleaning fluid to the head cleaner stick (Ref. No. 3-601-330-99).
- ③ As shown in the figure on the right, gently contact the head cleaner stick to the video head, and clean while turning the rubber part on the top of the rotating drum.

## 1-5. Notes for cassette compartment ass'y installation

1. After installing the cassette compartment ass'y onto the MD block ass'y, look from the front panel and check if the tab of the eject lever (MD block ass'y) is properly latched onto the rear of the knob of the lock slider (cassette compartment ass'y). See Fig. 1.
2. If the tab is latched on the reverse, use the tip of a screwdriver to lightly push the eject lever. Then install the cassette compartment ass'y.

#### Notes

1. When the MD block ass'y is not in the STOP position, the eject lever might not be able to move.
2. If the cassette compartment is not properly installed on the MD block ass'y (improper latching between the cassette compartment ass'y's lock slider and the MD block ass'y's eject lever) and the unit's AC plug is inserted into a power outlet, the cassette door and holder will operate repeatedly regardless of the ON/OFF setting of the power switch. The cassette will not be loaded even when it is inserted.

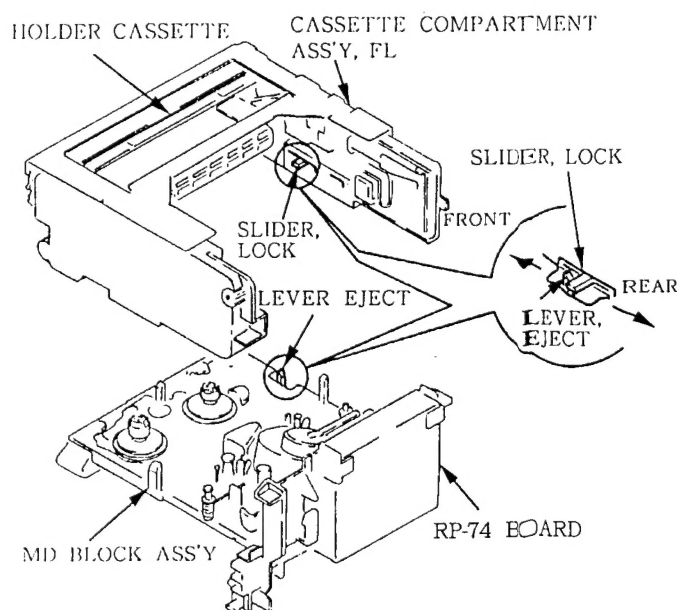


Fig. 1.

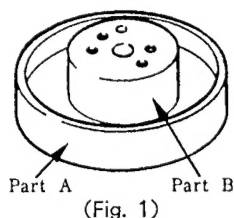
1-6.

## Replacing the rotating drum

### Procedure 3

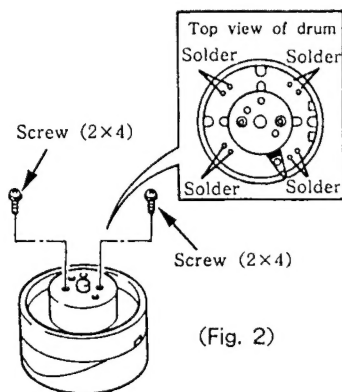
#### Precautions

- Be especially careful when handling the video head and terminals.
- Hold the drum by the upper part (Part B), do not touch the side of the drum (Part A) directly. See Fig. 1.

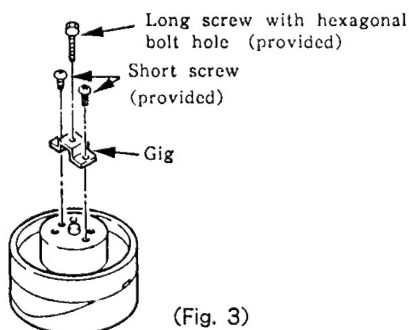


#### Removing the rotating drum

- ① As shown in Fig. 2, remove the two short screws (2×4).
- ② Completely remove the eight soldering points on the rotating drum's board. Refer to Fig. 2.

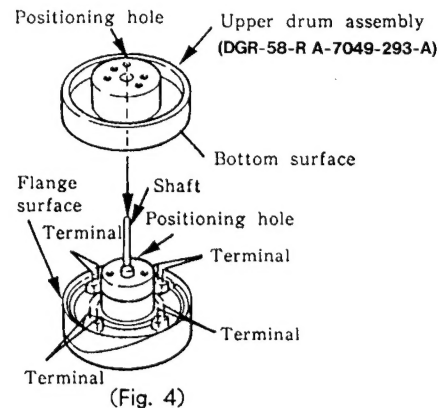


- ③ While referring to Fig. 3, use the two short screws supplied with the jig (which comes with the spare rotating drum) to fasten the jig to the drum. Then screw in the long screw until the drum is removed.

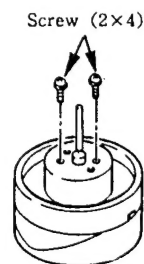


#### Installing the new drum

- ① Clean the flange surface and the new rotating drum's bottom surface. Refer to Fig. 4.
- ② While referring to Fig. 4, insert the supplied shaft through the jig and into the positioning hole of the lower drum. Slip the shaft into new rotating drum's positioning hole and gently set the rotating drum.



- ③ With the shaft still inserted in the positioning hole, use your hand to push down the rotating drum lightly. If the drum does not go down completely, refer to Fig. 5 and gradually tighten the two long screws (2×5) alternately to fasten the rotating drum.
- ④ Take out the shaft. If the shaft cannot be readily taken out, redo the procedure from step 2.



- ⑤ While referring to Fig. 2, solder the board's eight places and eight terminals.
- ⑥ After the rotating drum is replaced, use a head cleaner stick to clean the video head and transport system. Follow Procedure 2 of "Cleaning the video head and transport system."



## SECTION 2 GENERAL

This section is extracted from instruction manual.

### Precautions

#### On Safety

- For EV-S1000E (UK), operate on 240 V AC, 50 Hz. For EV-S1000E, operate on 220 V AC, 50 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- If the unit will not be used for an extended period, unplug it from the mains outlet. To disconnect the cord, pull it out by the plug. Never pull the lead itself.
- The unit is not disconnected from the mains (AC power source) as long as it is connected to the mains outlet, even if the unit itself has been turned off.

#### On Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, such as microwave ovens or large loudspeakers.
- Do not place any heavy object on the unit.

#### On Operation

- When the unit is not in use, turn the power off to conserve energy and to extend its life.
- Remove and store video cassettes after recording or playback.

#### On Cleaning

- Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth slightly moistened with a mild detergent solution.
- Do not use any type of solvent, such as alcohol or benzene, which might damage the finish.

#### On Repacking

- Do not throw away the carton and packing materials. They make an ideal container to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

#### On Cassette Care

- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

#### On the Remote Controller

Be sure not to lose the Remote Commander. Some function of this VTR can not be performed without the Remote Commander.

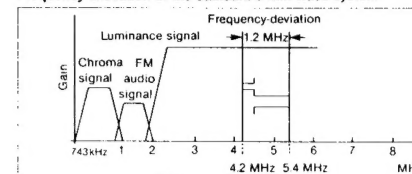
If you have any questions about the unit, contact your Sony service facility.

### Hi8 (High Eight) Video System

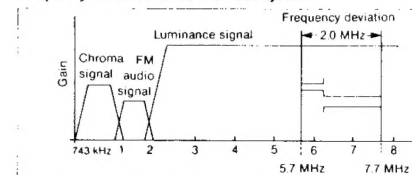
#### High Quality Picture

Information capacity is the key element for picture improvement. It can be increased by shifting the FM carrier frequency range. In the Hi8 video system, the FM carrier frequency range of the luminance signal is shifted to 5.7 — 7.7 MHz, up from the 4.2 — 5.4 MHz of the standard 8 mm video system. Thanks to this improvement, the horizontal resolution is increased.

Frequency allocation of the standard 8 mm video system



Frequency allocation of the Hi8 video system



#### High Grade Tape to Match the Hi8 Video System

Metal evaporated tapes have been developed exclusively for Hi8 recording. The high magnetic energy of the metal evaporated tape which allows for high-density recording, coupled with the Hi8 video recording technology will cover a wide frequency range to achieve recording of excellent picture quality.

#### S VIDEO (Separated Luminance/Chrominance Signal) Input/Output Connectors

Conventional video equipment transmits or receives the composite video signal. The composite video signal is liable to produce interference resulting in picture quality loss. On the other hand, the S VIDEO connector transmits or receives the video signal separated into the luminance signal and the chrominance signal. Flickers and colour blur in the picture are minimized with the separated video signals and picture sharpness is enhanced to such an extent that even hair and fine stripes are clearly visible. The S VIDEO connector also assures minimum loss in picture quality during editing.

#### Compatibility with a Standard 8 mm Video Cassette Recorder

Refer to the chart below for the compatibility between the Hi8 video system and the standard 8 mm system.

#### Recording with this VTR

Tape used	Hi8 indicator	Recording system
Hi8 tape	On	Hi8
	Off	Standard 8 mm video system
Standard 8 mm tape	Automatically turned off	Standard 8 mm video system

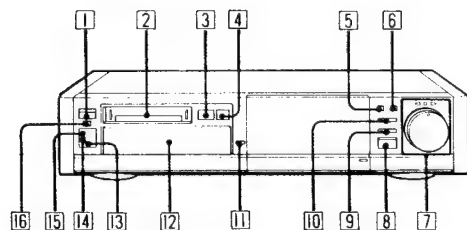
#### Playback with this VTR

Tape used	Playback system
Tape recorded in Hi8 video system	The recording video system is automatically selected
Tape recorded in standard 8 mm video system	

#### Notes

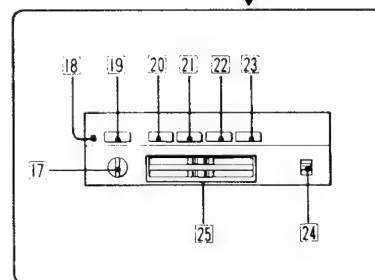
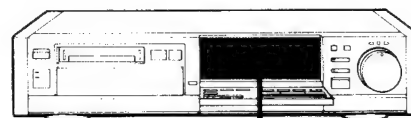
- Hi8 recording or playback can only be performed with a Hi8 tape.
- A standard 8 mm tape cannot be recorded or played back using the Hi8 video system.
- The recording tape speed of the Hi8 video system is compatible with the standard 8 mm video system. Recording/playback time is 1.5 hours in the SP mode and 3 hours in the LP mode using a P5/E5-90HME tape or equivalent.

## Operational Parts



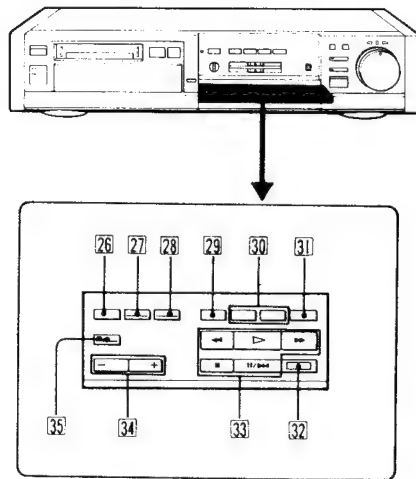
### Front Panel

- 1 ON/STANDBY switch
- 2 Cassette compartment
- 3 EJECT button
- 4 Hi8 (Recording/playback) indicator  
Lights to indicate that Hi8 recording or playback can be performed.
- 5 PLAYER control button
- 6 RECORDER control button
- 7 EDIT SHUTTLE (REVERSE/FORWARD) and indicator
- 8 SYNCHRO EDIT button and indicator
- 9 EDIT STANDBY button and indicator
- 10 EDIT MONITOR button and indicator
- 11 PUSH OPEN button
- 12 Display window
- 13 Remote sensor
- 14 Hi-Fi STEREO indicator  
Lights when playing back the Hi-Fi audio track recorded in the bilingual or stereo mode. Also lights when recording is made in the bilingual or stereo mode on the Hi-Fi track.
- 15 PCM indicator  
Lights when recording on or playing back the PCM audio track.
- 16 ON/STANDBY lamp [for EV-S1000E (UK) only.]  
Lights when the VTR is in the standby mode.

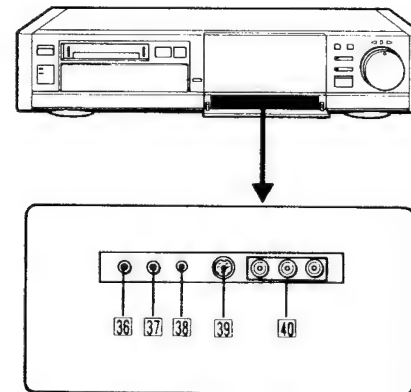


- 17 PHONE LEVEL (headphones level) control
- 18 Reset switch  
Press this switch with a pointed object such as a ball point pen if the VTR does not operate even when pressing the operating buttons. When this switch is pressed, the information entered to the VTR's memory will be lost. Reset the information before operating the VTR again.
- 19 Hi8 mode button
- 20 COUNTER RESET button
- 21 TV/VTR button
- 22 REC MODE SP/LP button
- 23 INPUT SELECT button
- 24 AUDIO MONITOR select switch  
(PCM/MIX/STD (Hi-Fi))
- 25 REC LEVEL controls

## Operational Parts

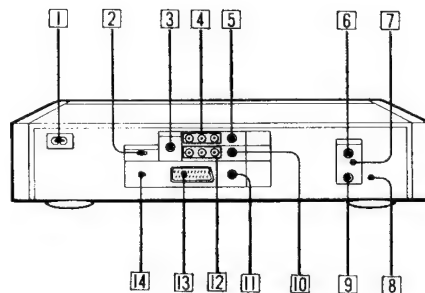


- 26 TIMER CHECK button
- 27 TIMER REC ON/OFF button
- 28 QUICK TIMER button
- 29 INDEX button
- 30 INDEX MARK/ERASE buttons
- 31 EDIT button
- 32 • REC (recording) button
- 33 Tape transport buttons  
◀ REW (rewind), ▶ PLAY (playback), ▶▶ FF (fast-forward), ■ STOP, || PAUSE/STILL
- 34 PROGRAM +/- buttons
- 35 AUDIO DUB button and indicator



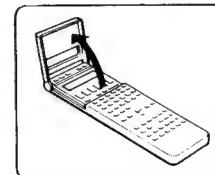
- 36 HEADPHONES jack (stereo minijack)
- 37 MIC (microphone) jack (minijack)
- 38 CONTROL L (LANC) jack (stereo mini-minijack)
- 39 LINE IN 2 S VIDEO connector (4-pin DIN)
- 40 LINE IN 2 VIDEO/AUDIO jacks (phono)  
When connecting a monaural equipment to these jacks, connect to the LINE IN 2 AUDIO L (MONO) jack only.

**About LANC**  
LANC stands for Local Application Control Bus System.  
The LANC connector is used for controlling the tape transport of video equipment and peripherals connected to it. This connector has the same function as the connectors indicated as CONTROL L or REMOTE.




### Rear Panel

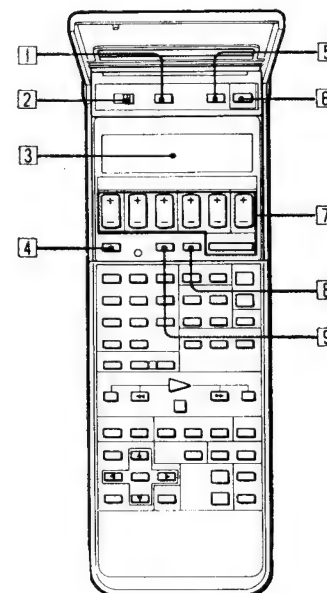
- 1 AC INPUT
- 2 COMMAND MODE selector
- 3 CONTROL L (LANC) connector (5-pin DIN)
- 4 LINE IN 1 VIDEO/AUDIO jacks (phono)
- 5 LINE IN 1 S VIDEO connector (4-pin DIN)
- 6 AERIAL IN socket
- 7 DX/LOCAL switch
- 8 RF CHANNEL screw (30 CH to 39 CH)
- 9 AERIAL OUT socket
- 10 LINE OUT S VIDEO connector (4-pin DIN)
- 11 MONITOR OUT S VIDEO connector (4-pin DIN)
- 12 LINE OUT VIDEO/AUDIO jacks (phono)
- 13 MONITOR OUT EURO-AV connector (21-pin CENELEC)
- 14 VIDEO OUT (VIDEO or S VIDEO) selector



### Remote Commander RMT-451

#### Before you begin

- The buttons on the Commander with the same name or mark as those on the unit have the same function.
- The buttons with a red dot inscribed on top can be used to remotely control Sony TV's with the  mark when the TV/VTR remote control selector is set to TV.
- Keep the upper cover closed except where noted.



#### 1 TIMER REC (ON/OFF) button

#### 2 TV/VTR remote control selector

Set to VTR to control this VTR and set to TV to control the TV.

#### 3 LCD (Liquid-crystal) display

#### 4 COMMAND MODE button

#### 5 TV/VTR button

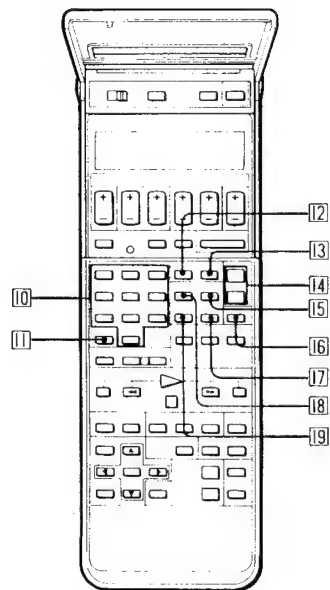
#### 6 (on/standby) button

#### 7 Timer recording/clock set buttons

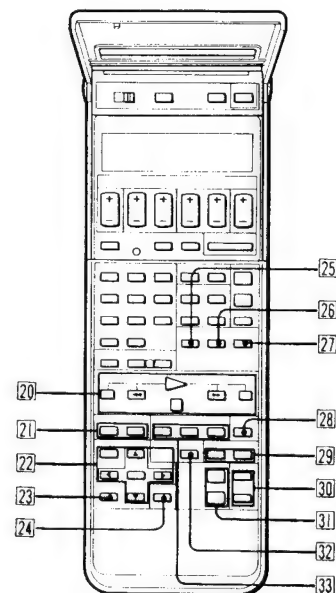
- 1 DAY
- 2 TURN ON time
- 3 TURN OFF time
- 4 PROG (programme position)
- 5 TRANSMIT

#### 8 MEMORY button

#### 9 CLOCK SET (SET/START) button

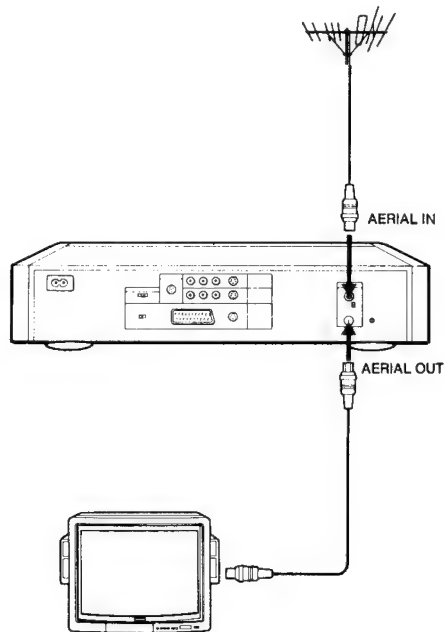


- 10 **Programme position number buttons**  
Press to select the programme position directly.  
To enter single digit numbers, press 0 and then the desired number.
- 11 **- / - (10's digit) button**  
Press to select a programme position number over 9.  
To select 23, press - / -, then 2 and 3.
- 12 **INPUT SELECT button**  
Open the cover to select the input signal for timer recording. Close the cover to change the current input setting.
- 13 **REC MODE select button**
- 14 **PROG (programme) + / - buttons**
- 15 **MAIN/SUB button**
- 16 **INDEX button**
- 17 **COUNTER RESET button**
- 18 **DATA SCREEN button**
- 19 **EDIT MONITOR button**



- 20 **Basic operational buttons**  
■ PAUSE button  
● REC (recording) buttons  
SEARCH button  
▶ PLAY  
◀ REW (rewind)  
▶ FF (fast-forward)  
■ STOP
- 21 **SHUTTLE EDIT < / > buttons**
- 22 **Menu operation buttons**  
MENU  
EXECUTE  
Cursor shift buttons ▲ / ▼ / ◀ / ▶
- 23 **FUNCTION MEMORY button**
- 24 **TIMER ON SCREEN button**
- 25 **▄ ► FRAME button**
- 26 **X1/5 button**
- 27 **X2 button**  
When this button is pressed, the playback sound will automatically be changed to monaural, even though the STEREO indicator will be turned on in the display window.
- 28 **TV SCAN button**
- 29 **INDEX MARK and ERASE button**
- 30 **TIMER CHECK/TIMER CLEAR buttons**
- 31 **VOL (TV volume) + / - buttons**  
Press to control the volume of the TV. Effective only for Sony TVs with the mark.
- 32 **AUDIO DUB button**
- 33 **P in P (picture in picture) buttons**

## Connections

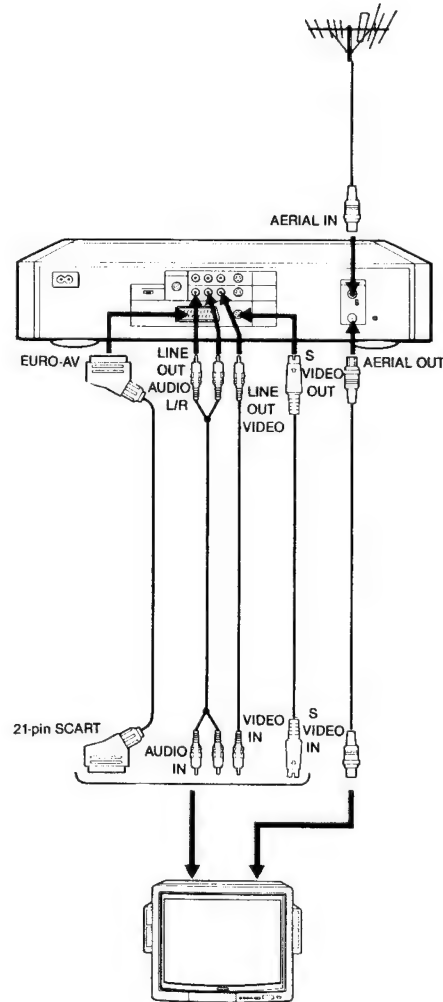


### Before You Begin

- Turn off the power to the unit and TV.
- Do not connect the mains lead until all of the other connections are complete.
- Connect firmly as a loose connection may cause picture distortion.

### To Connect a TV without Audio/video Inputs

- 1 Remove the aerial cable on the TV from its socket.
- 2 Connect the aerial cable to AERIAL IN on the VTR.
- 3 Connect the aerial input of the TV to AERIAL OUT on the VTR using the supplied cable.



### To Connect a TV with Audio/video Inputs

Connections using the audio/video inputs on the TV provide a better quality playback picture.

#### If your TV is equipped with an EURO-AV connector

- 1 Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."
- 2 Connect LINE OUT AUDIO/MONITOR OUT EURO-AV of the VTR to the audio input/ EURO-AV on the TV with an optional cable.
- 3 Set the VIDEO OUT (VIDEO or S VIDEO) selector on the rear panel to S VIDEO to view the picture of the Luminance and Chrominance separated signal, i.e. the same as the video signal output from the S VIDEO connector. Set it to VIDEO to output standard video signals.

#### If your TV is equipped with S VIDEO input connector

- 1 Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."
- 2 Connect LINE OUT AUDIO/MONITOR OUT S VIDEO of the VTR to the AUDIO/S VIDEO input on the TV with the supplied cable.

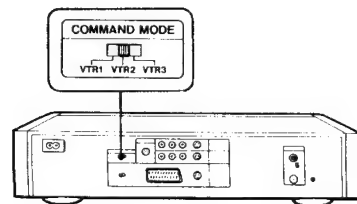
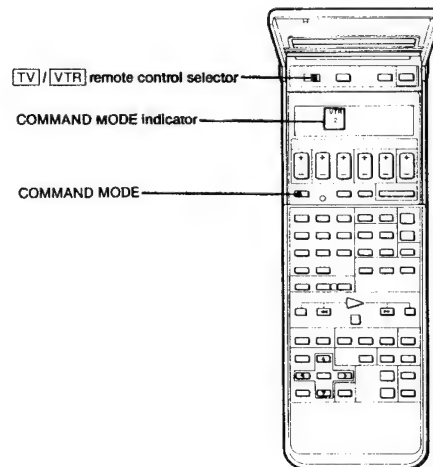
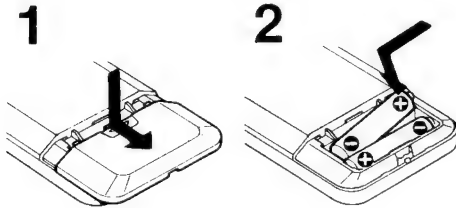
#### If your TV is equipped with audio/video input jacks

- 1 Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."
- 2 Connect LINE OUT AUDIO/VIDEO jacks on the VTR to the audio/video input jacks on the TV.

### Notes

- If this VTR is connected to a TV or monitor which does not have S VIDEO input, and the VIDEO OUT (VIDEO or S VIDEO) selector is set to S VIDEO, picture will be displayed on the screen but without colour.
- Avoid making VIDEO and S VIDEO connections at the same time.
- The on-screen display will not be output to the TV if connection is made via LINE OUT AUDIO/VIDEO jacks.

## Remote Control Operation



### Preparing the Commander

#### Battery insertion

- 1 Slide and remove the cover.
- 2 Insert two R6 (size AA) batteries with the correct polarity.
- 3 Close the cover.  
The clock on the Commander will read — D — : — : — . Set the date and clock referring to "Date and Clock Setting."

#### Command mode setting

Set the COMMAND MODE selector on the rear of this VTR to the same number displayed in the LCD display. Normally set to VTR 2. To change the setting on the Commander, press COMMAND MODE repeatedly.

#### Note on batteries

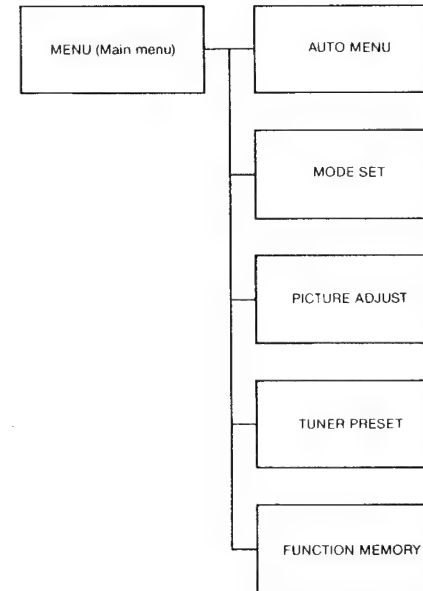
With normal operation, batteries will last for about six months. If the Commander will not be used for a long period, remove the batteries to avoid possible damage from battery leakage.

## The Menu System

### Overview

This VTR employs a menu system in which various settings and adjustments necessary for operation can be made. The menu system of this VTR consists of five different menu displays which can be selected from the main MENU.

Refer to the following pages for the details of each menu.





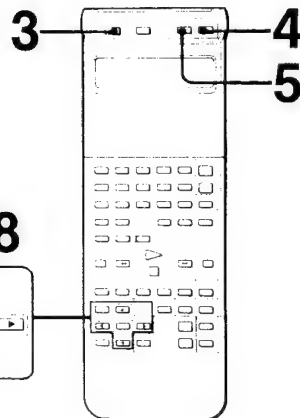
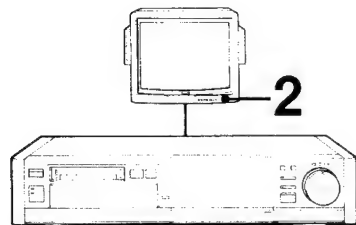
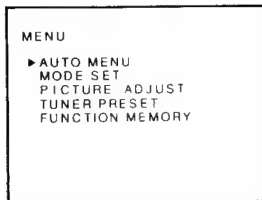
## To Call Up the Menu Display

- 1 Check that the VTR and the TV are connected properly.  
Connect the VTR and the TV using the AERIAL OUT socket, MONITOR OUT EURO-AV connector, or the MONITOR OUT S VIDEO connector on the VTR referring to "Connections."
- 2 Turn on the TV.  
Select the programme position for VTR playback if connection is made using the AERIAL OUT socket on the VTR. Select VTR input if connection is made using the MONITOR OUT EURO-AV or S VIDEO connector.
- 3 Set the TV/VTR remote control selector to VTR.
- 4 Press ON/STANDBY.
- 5 Press TV/VTR to turn on the VTR indicator.  
When connection is made via the AERIAL OUT socket on the VTR.
- 6 Press MENU.  
The main MENU will appear on the screen.
- 7 Select the desired menu by moving the cursor.  
Press ▲ to go up, and ▼ to go down.
- 8 Press EXECUTE.  
The selected menu will appear on the TV screen.

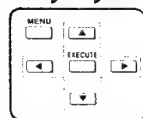
**To erase the menu display**  
Press MENU again.

### Note

The menu display will not be output to the TV screen if connection is made via the LINE OUT S VIDEO connector or LINE OUT VIDEO jacks.



6,7,8



## AUTO MENU

▶ PLAY-REW-POWER OFF  
GO TO ZERO-STOP  
GO TO ZERO-PLAY  
REW-POWER OFF  
REW-EJECT-POWER OFF  
REW-PLAY  
REW-TIMER REC

## EV-S1000E

### MODE SET

▶ X2 AUDIO •ON OFF  
LANC MODE M •S  
SHUTTLE MODE •A B  
AUDIO LINE IN •ST BIL  
PFS ON •OFF  
VPS •ON OFF  
AUTO STEREO •ON OFF  
COLOUR SYSTEM •AUTO PAL

## EV-S1000E (UK)

### MODE SET

▶ X2 AUDIO •ON OFF  
LANC MODE M •S  
SHUTTLE MODE •A B  
AUDIO LINE IN •ST BIL  
PFS ON •OFF  
TIMER TITLE •ON OFF  
NICAM •ON OFF

## AUTO MENU

The VTR can be set to enter the desired operational sequence. For the actual operation, refer to "Assigning a Desired Operation Mode" on page 45.

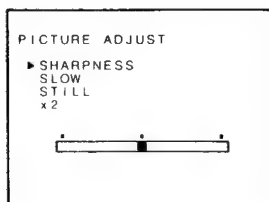
## MODE SET

Various mode settings can be made in this menu. For details of each setting, refer to "Mode Setting" on page 30.

## The Menu System

### PICTURE ADJUST

The playback picture can be adjusted to obtain maximum quality in this menu. Refer to "Picture Adjustments" on page 40



### FUNCTION MEMORY

PLAY-REW-POWER OFF  
GO TO ZERO-STOP  
GO TO ZERO-PLAY  
REW-POWER OFF  
REW-EJECT-POWER OFF  
REW-PLAY  
▶ [AUTO MENU]

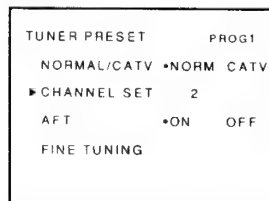
### FUNCTION MEMORY

A desired operational sequence of the VTR can be assigned to the FUNCTION MEMORY button on the Commander. With a press of the FUNCTION MEMORY button, the selected sequence will begin. Refer to "Assigning an Auto Menu Mode to the FUNCTION MEMORY Button" on page 47.

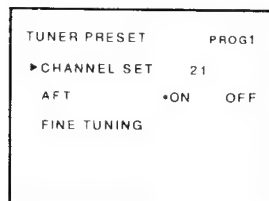
### TUNER PRESET

Presetting of the active channels and fine tuning of a weak station can be performed in this menu. For the actual operation, refer to the "Presetting the Active Channels" on page 26

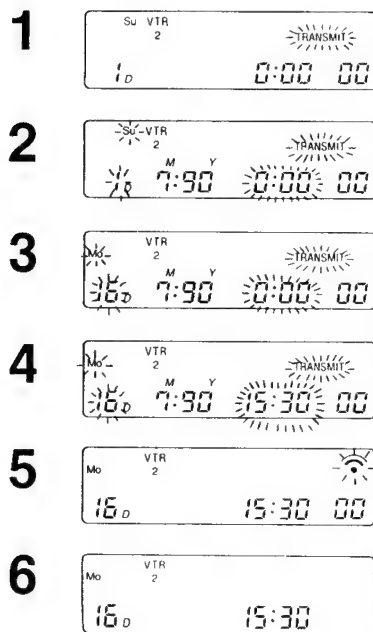
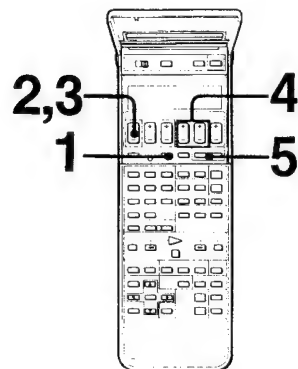
EV-S1000E



EV-S1000E (UK)



## Date and Clock Setting



### Before You Begin

The time and date between the years 1990 and 2004 can be set with the Commander.

### Operation

Example: To set to 15:30, Monday, July 16, 1990.

- 1 Open the cover and press CLOCK SET.
- 2 Press the D (day) button until 7 M 90 Y is displayed.  
The day will be advanced slowly up to 30 days ahead and then the month will be advanced.
- 3 Press the + side or - side of the D (day) button until 16 D is displayed.  
The day of the week appears automatically.
- 4 Press the H (hour) and M (minute) buttons under TURN OFF to set to 15:30.
- 5 Point the Commander at the VTR and press TRANSMIT.
- 6 Check the display window on the unit and close the cover.

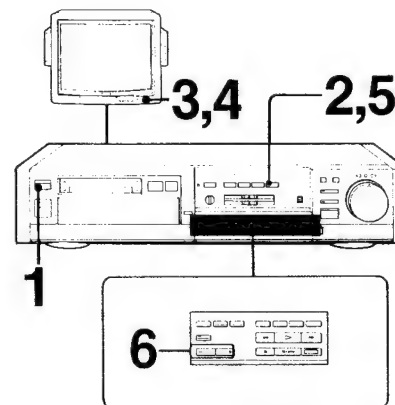
#### When 0:00 is blinking on the unit

Any time power is interrupted for more than one hour, you will see 0:00 blinking when power is restored. You will have to re-set the date and clock again.

#### When a short beep sounds repeatedly

The VTR is in the timer recording or quick timer recording mode and the setting cannot be transmitted.

## Adjusting the TV



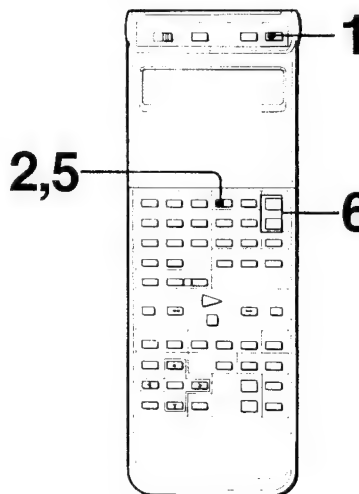
### Before You Begin

If you have connected your VTR and TV using the AERIAL OUT on the VTR, one of the television programme positions must be adjusted to receive the VTR's playback signal. If TV — VTR connection is made by other means, skip this step.

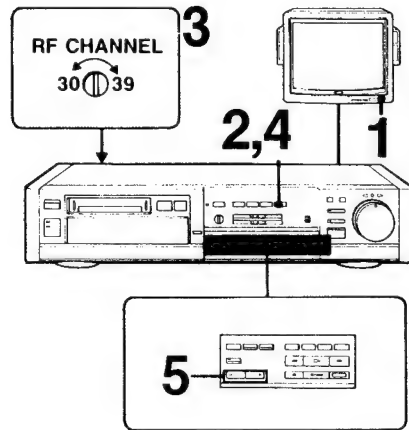
### Operation

- 1 Make connections referring to "Connections" and press ON/STANDBY.
- 2 Press INPUT SELECT to light LINE L2 in the display window.  
Do not connect any equipment to the LINE IN 2 VIDEO jack.
- 3 Turn on the TV and select a programme position that is not used to receive a TV station.
- 4 Tune the TV so that a blue screen with time counter and tape speed indication is clearly seen on the TV screen.
- 5 Press INPUT SELECT to light TUNER in the display window.
- 6 Press the PROG (PROGRAM) + / - and check that the screen changes to a different programme.

Now your TV is tuned to receive the VTR's playback picture. Whenever playing back a tape, select the programme position you chose in step 3. If you are not sure how to tune your TV, refer to the TV's instruction manual or consult your dealer.

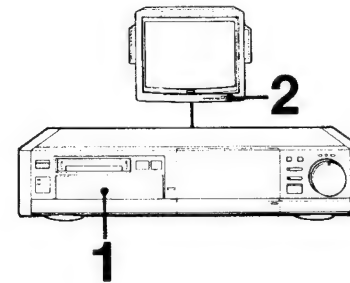
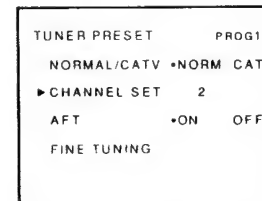
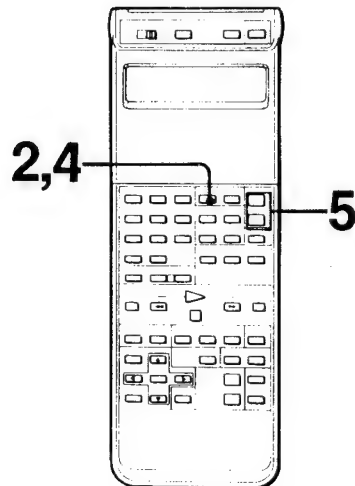


## Presetting the Active Channels



### When the Playback Picture is not Free of Disturbance

- 1 Select a programme position on the TV between UHF channels 30 and 39, so that the TV shows no picture and a steady rustling sound or no sound is heard.
- 2 Press INPUT SELECT to light LINE L2 in the display window.  
Do not connect any equipment to the LINE IN 2 VIDEO jack.
- 3 Turn the RF CHANNEL screw with the supplied screwdriver until an undistorted screen is obtained.
- 4 Press INPUT SELECT to light TUNER in the display window.
- 5 Press PROG (PROGRAM) + / - and check that the screen changes to a different programme.



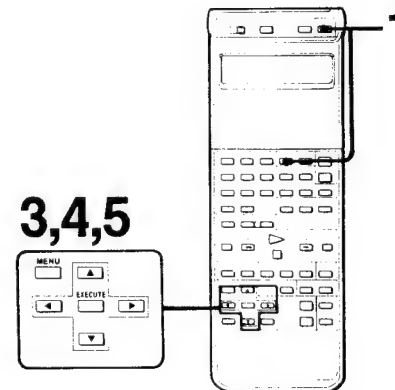
### Before You Begin

- Your VTR is capable of receiving the following channels:  
EV-S1000E: VHF channels E2 — E4, E5 — E12, UHF channels E21 — E69, and cable TV channels S01 — S03, S1 — S20 and S21 — S41  
EV-S1000E (UK): UHF channels B21 — B68
- The receivable channels are governed by the TV broadcasting system in your area.
- Up to 60 channels can be allocated to any desired programme position.
- The TUNER PRESET menu can be displayed only when VTR — TV connection is made via the AERIAL OUT socket on the VTR, the MONITOR OUT EURO-AV or S VIDEO.

### To Call Up the TUNER PRESET Menu

- 1 Turn on the VTR and press INPUT SELECT to light the TUNER indicator and the programme position number in the display window.
- 2 Turn on the TV.  
Set to the programme position for the VTR playback if VTR — TV connection is made via the AERIAL OUT socket on the VTR. Select VTR input if VTR — TV connection is made via MONITOR OUT EURO-AV or S VIDEO.
- 3 Press MENU while the VTR is in the stop mode.  
The main MENU appears.
- 4 Move cursor with ▲ or ▼ to TUNER PRESET.
- 5 Press EXECUTE.  
The TUNER PRESET menu appears.

**Note for the users of EV-S1000E (UK)**  
The TUNER PRESET menu of the EV-S1000E (UK) does not have the NORMAL/CATV selection which is shown in the illustration.



## Tuning a Desired Channel

[For EV-S1000E (UK), skip steps 1 and 2.]

- 1 Call up the TUNER PRESET menu.
- 2 Select the desired programme position by pressing PROG (PROGRAM) +/-.
- 3 Move cursor to NORMAL/CATV with ▲ or ▼. Select NORM to receive normal programmes and CATV to receive CATV programmes with ◀ or ▶.
- 4 Move cursor to CHANNEL SET with ▲ or ▼ and keep pressing ◀ or ▶. The channel number automatically increases with ▶ and decreases with ◀. The number stops changing when the first channel received in your area is detected and that channel will be displayed.
- 5 To allocate a channel to the next programme position, repeat steps 2 to 4.
- 6 Press EXECUTE to store the allocated channels and return to original screen.

## To Allocate the Channels Directly

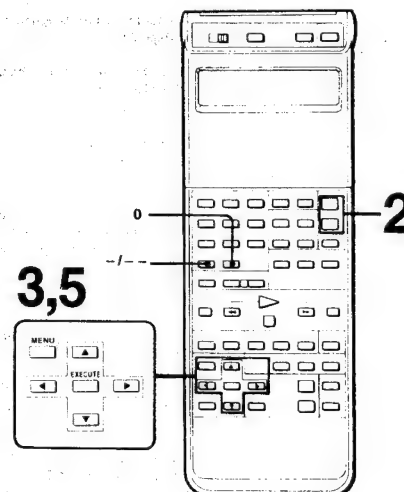
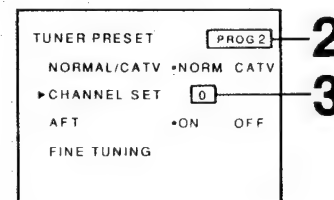
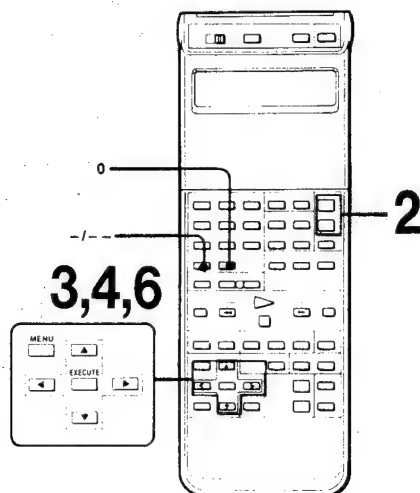
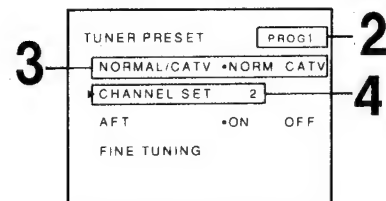
In step 4 in "Tuning a Desired Channel," set the cursor to CHANNEL SET. Enter the desired programme numbers using the programme position number and +/- buttons. To enter one's digits, press 0 and then the desired number. To enter two-digit numbers, press +/-, the ten's digit number, and lastly the one's digit number.

## Note

If the picture displayed on the screen in step 4 is so distorted that you cannot identify the menu operation screen, first pull out the aerial cable from the AERIAL IN socket, next repeat step 4, then return the aerial cable to the AERIAL IN socket.

## Channel scanning on your VTR

- When ▶ is pressed in steps 4 and 5, the channels are scanned in the following order.  
When ◀ is pressed the scanning order is reversed.  
VHF (E2-E12) → UHF (E21-E69) → CATV (S1-S20) → HYPER BAND (S21-S41) → CATV (S01-S05).
- The EV-S1000E (UK) only scans UHF channels B21 to B68.
- In Italy, channels 13 to 20 correspond to channels A to H.



## Erasing Unwanted Programme Positions

The VTR can be preset so that only the desired programme positions will appear when you press PROG (PROGRAM) +/-.

- 1 Call up the TUNER PRESET menu.
- 2 Press PROG (PROGRAM) +/- to call up the unused programme position.
- 3 Press +/- and then 0 or keep pressing ◀ or ▶ until 0 is displayed.
- 4 Repeat steps 2 and 3 to erase other programme positions.
- 5 Press EXECUTE.

## To enter the erased programme positions again

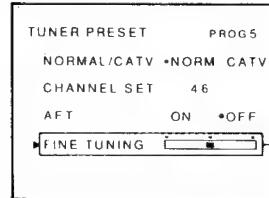
Follow the procedure in "Tuning a Desired Channel."

## Mode Setting

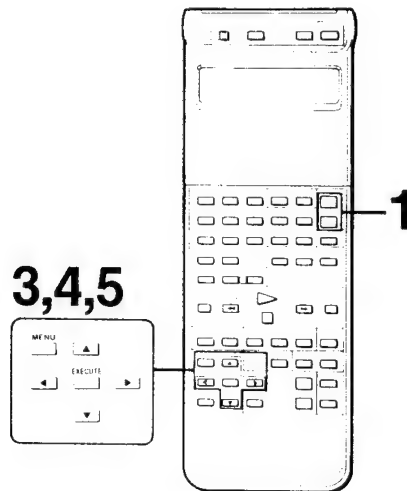
### Manually Fine-tuning a Weak Station

If AFT ON is selected in the TUNER PRESET menu, the VTR automatically tunes the received channels. However, when the programme received on the VTR is distorted due to signal interference, manual fine tuning may solve the problem.

- 1 Select the distorted programme position by pressing PROG (PROGRAM) + / -.
- 2 Call up the TUNER PRESET menu.
- 3 Move cursor to FINE TUNING.
- 4 Press ◀ or ▶ until the best picture is obtained. AFT OFF will be automatically selected. The fine tuning meter appears.
- 5 Press EXECUTE to store that position and return to the original screen.



3



### EV-S1000E

MODE SET

▶ X2 AUDIO	• ON	OFF
LANC MODE	M	• S
SHUTTLE MODE	A	B
AUDIO LINE IN	• ST	BILL
PFS	ON	• OFF
VPS	• ON	OFF
AUTO STEREO	• ON	OFF
COLOUR SYSTEM	• AUTO	PAL

### EV-S1000E (UK)

MODE SET

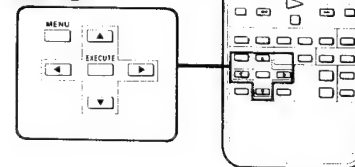
▶ X2 AUDIO	• ON	OFF
LANC MODE	M	• S
SHUTTLE MODE	A	B
AUDIO LINE IN	• ST	BILL
PFS	ON	• OFF
TIMER TITLE	• ON	OFF
NICAM	• ON	OFF

Check the setting in the MODE SET menu before operating this VTR. Make changes depending upon the features you wish to enjoy on this VTR.

### Operation

- 1 Press MENU.  
The main MENU appears.
- 2 Move cursor by using ▲ or ▼ to MODE SET.
- 3 Press EXECUTE.  
The MODE SET menu appears.
- 4 Select the mode to be set by using ▲ or ▼.
- 5 Select the desired mode by using ◀ or ▶.
- 6 Press EXECUTE.  
The selected mode will be stored and the MODE SET menu will be erased.

2-6



## Mode Setting

### Details of the MODE SET Menu

#### X2 AUDIO ON/OFF

Select ON if you wish to hear the sound during x2 speed playback. The playback sound will automatically be switched to monaural. Select OFF if you do not wish to hear the sound during x2 speed playback.

#### LANC MODE M/S\*

This selection is necessary when remotely controlling other video equipment with this VTR, or when controlling this VTR with other video equipment via the CONTROL L connector. Select M to control other video equipment with this VTR. Select S to control this VTR with other video equipment.

Note that the VTR will automatically enter the LANC MODE M mode in the following cases:

- 1) When the PLAYER control button is pressed and the button is turned on.
- 2) When the EDIT STANDBY button is pressed and the indicator is turned on.

#### SHUTTLE MODE A/B

Change the setting depending upon the type of video equipment you wish to control with this VTR. Select A when a remote commander with JOG/SHUTTLE function cannot be used for the other video equipment. Select B when a remote commander with JOG/SHUTTLE function can be used for the other video equipment.

#### AUDIO LINE IN ST(stereo)/BIL(bilingual)

Select ST to receive stereo programme sources from the AUDIO LINE IN jacks.  
Select BIL to receive bilingual programme sources from the AUDIO LINE IN jacks.

#### PFS (picture fine select)

If the picture is distorted or has streaks, switch to ON or OFF whichever provides a better picture. Normally, select OFF.

#### VPS ON/OFF [not available for EV-S1000E (UK)]

Select ON to record a TV programme using the VPS function. Select OFF otherwise. See "VPS Function" on page 65 for details.

#### TIMER TITLE ON/OFF [for EV-S1000E (UK) only]

Select ON to start timer recording with a timer title. Select OFF otherwise. See "Recording a Timer Title" on page 64 for details.

#### AUTO STEREO [not available for EV-S1000E (UK)]

Normally set to ON to receive and record the stereo/bilingual broadcast programmes automatically.  
Select OFF if there is too much interference in the stereo sound. The broadcast will be received in monaural.

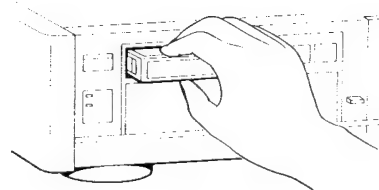
#### NICAM ON/OFF [for EV-S1000E (UK) only]

Select ON to receive and record the stereo/bilingual programmes based on the "NICAM" system adopted in the United Kingdom. Otherwise, select OFF.

#### COLOUR SYSTEM AUTO/PAL [not available for EV-S1000E (UK)]

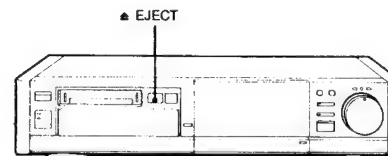
Normally set to AUTO. According to the TV programme, the colour system will automatically be switched to PAL or DDR SECAM. Select PAL if the signal is too weak or the picture is distorted. DDR SECAM programmes may not be displayed properly.

## Handling Video Cassettes



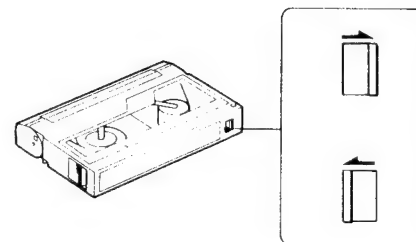
### Cassette Insertion

Insert the cassette by slowly pressing it with the window facing upwards. When a cassette is inserted, the power will be turned on automatically.



### Cassette Ejection

Press **EJECT** on the unit. When the VTR is turned off, pressing the **EJECT** button will turn on the unit, eject the cassette, and turn it off again. **EJECT** will not function during recording or recording pause mode.



### Erase Protection

When recording is made on a pre-recorded tape, the previous recording will be erased. To avoid unintentional erasure, slide out the red tab on the cassette to cover the opening.



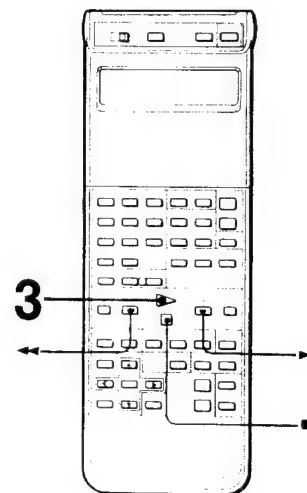
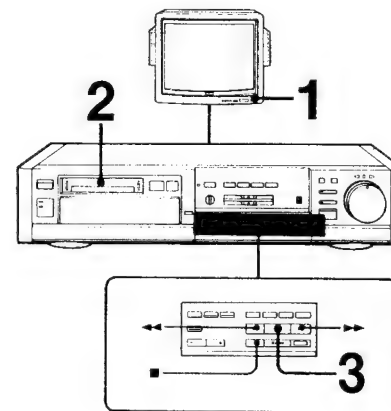
## Recording/playback Time

The recording time of a cassette in the LP mode is twice as long as that in the SP mode. However, to obtain better quality picture, use of SP mode is recommended. The recording speed can be selected with the REC MODE button. The playback speed will automatically be detected.

Type of Cassette	SP mode	LP mode
P5-15MP	15 min.	30 min.
P5-30MP/E5-30HME	30 min.	1 hour
P5-60MP/E5-60HME	60 min.	2 hours
P5-90MP/E5-90HME	90 min.	3 hours

### Notes on cassettes

- Never insert anything in the small holes at the rear of the cassette as the VTR distinguishes between Hi8 cassette tapes and standard 8 mm cassette tapes by the shape of the holes.
- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- To record from the beginning of the tape, run the VTR for about 15 seconds at the beginning of the cassette before recording. It will avoid missing the starting point during playback on a video cassette recorder.
- When the VTR is not in use, remove the cassette.



## Playing a Tape

**1 Turn on the TV and select the programme position for the VTR.**  
If VTR-TV connection is made via the MONITOR OUT EURO-AV or VIDEO LINE OUT jacks on the VTR, select the input for the VTR.

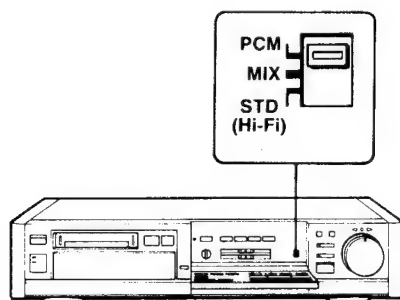
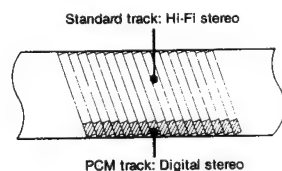
**2 Insert a cassette.**  
The VTR will be turned on.

**3 Press >.**  
Playback starts.

**To stop playback**  
Press ■

**To rewind the tape**  
Press ◀◀

**To advance the tape rapidly**  
Press ▶▶



### Selecting the Monitor Sound

Audio recording pattern on the video tape

#### Selecting the playback track

Choose the desired track to be played back by setting the AUDIO MONITOR switch.

#### PCM

To playback the digital stereo signals recorded on the PCM track. When nothing is recorded on the PCM track, Hi-Fi stereo track will automatically be played back.

#### MIX

To playback the mixed sound of the PCM track and the standard track.

#### STD (Hi-Fi)

To playback the Hi-Fi stereo track recorded on the standard track.

#### Selecting the playback sound after dubbing additional sounds

Set the AUDIO MONITOR switch in the following manner.

#### PCM

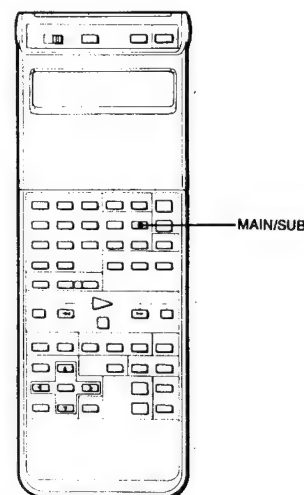
To playback the additionally dubbed sound (PCM track) only.

#### MIX

To playback both the additionally dubbed sound (PCM track) and the original sound (standard track).

#### Notes

- Normally set the AUDIO MONITOR switch to PCM to enjoy high quality playback sound.
- The additionally dubbed sound cannot be heard if the AUDIO MONITOR switch is set to STD (Hi-Fi).



### Selecting the playback sound of a stereo/bilingual tape

Choose the desired sound to be played back with the MAIN/SUB button on the Commander.

Type of tape	MAIN/SUB button and indicator
Stereo	<p>Each press changes the playback sound to:</p> <pre>           STEREO (stereo sound)                           v           L (left channel)                           v           R (right channel)           </pre>
Bilingual	<p>Each press changes the playback sound to:</p> <pre>           MAIN/ (main sound)                           v           SUB/ (sub sound)                           v         MAIN/SUB/         (main/left channel          and sub/right channel)           </pre>

#### If the sound is not heard or heard only intermittently

When a tape which has been recorded on a video camera recorder or a video cassette recorder without the PCM function is played back on this unit, set the AUDIO MONITOR selector to STD. The PCM indicator may blink, but it will not affect the sound.

#### When connection is made to a TV without video/audio inputs

To monitor the playback sound in stereo, make connection to a stereo system.

### Various Playback Modes

#### Playback pause/still

Press **II** on the unit, or **II** or **II** on the Commander during playback. Press **▷** to resume normal playback.

#### Frame-by-frame playback (Commander only)

Press **II** in the playback still mode. Each press of **II** will advance the picture one frame. Press **▷** to resume normal playback.

#### Slow speed playback

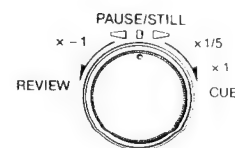
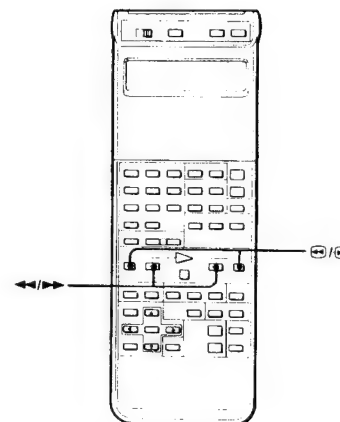
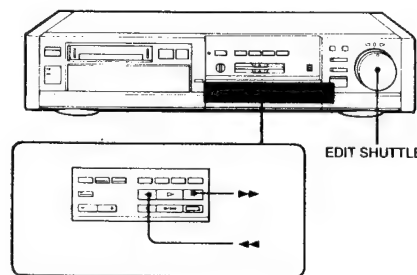
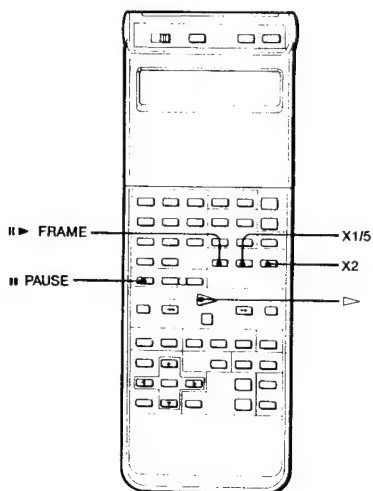
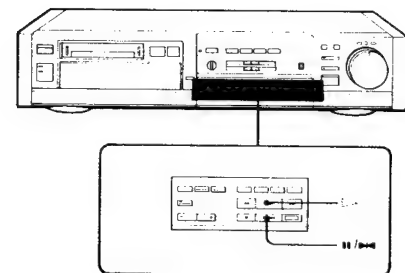
Press **X1/5** for slow playback at 1/5 times normal speed. The speed setting can be made from any playback mode. Press **▷** to resume normal playback.

#### Double speed playback

Press **X2** for double speed playback. The sound can be heard when **X2 AUDIO ON** is selected in the **MODE SET** menu (see page 30). The sound will automatically be switched to monaural when this button is pressed. The speed setting can be made from any playback mode. Press **▷** to resume normal playback.

#### Note

Slow speed playback will automatically be cancelled after one minute.



#### Picture search

Press **◀** or **▶** during playback. The picture will be scanned in reverse with **◀** and forward with **▶** as long as they are pressed. Release the button to return to the previous playback mode.

#### Locked picture search

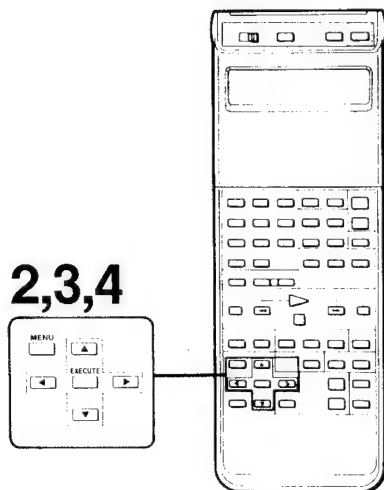
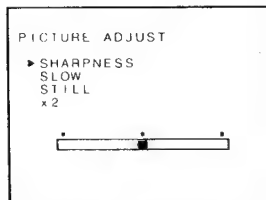
Press **◀** or **▶** SEARCH during playback. The picture will keep on scanning in reverse with **◀** and in forward with **▶** even after the button is released. To resume normal playback, press **▷**.

#### FR picture search

Press **▶** during fast-forward or **◀** during rewind modes. The fast forward or rewind mode picture can be viewed while the button is pressed.

#### Using the EDIT SHUTTLE

Various playback modes can be selected by holding the EDIT SHUTTLE in the position illustrated. Turn it clockwise for forward direction and counterclockwise for reverse direction. Releasing it will make the picture enter the PAUSE/STILL mode. To resume normal playback, press **▷**.



### Picture Adjustments

The picture can be adjusted as desired using the PICTURE ADJUST menu. Call up the PICTURE ADJUST menu referring to the following procedure:

- 1 Press MENU.  
The main MENU appears.
- 2 Move cursor to PICTURE ADJUST by using ▲ or ▼.
- 3 Press EXECUTE.  
The PICTURE ADJUST menu appears.
- 4 Move cursor to the parameter to be adjusted by using ▲ or ▼.
- 5 Press ◀ or ▶ to adjust the picture.
- 6 Press EXECUTE to store the setting and erase the PICTURE ADJUST menu.

#### Details of each parameter

##### SHARPNESS

Press ▶ for a sharper picture. Press ◀ for a softer picture. Adjustable only in the playback mode.

##### SLOW

Press ◀ or ▶ to clear out the noise bands that may appear during slow speed playback. Adjustable only in the slow speed playback mode.

##### STILL

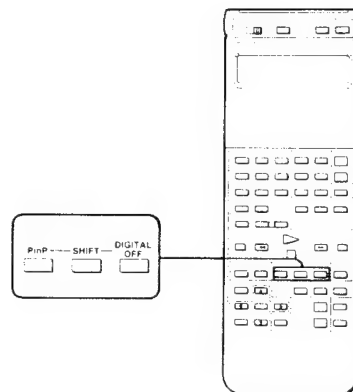
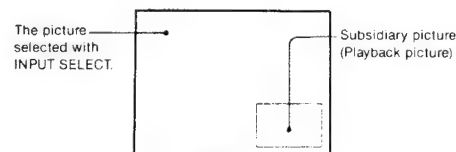
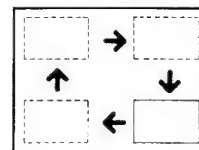
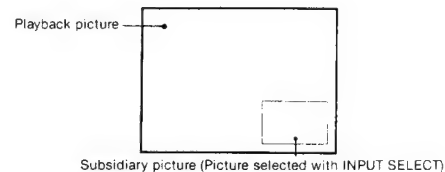
Press ◀ or ▶ so that the vertical shaking of the picture during the still mode will stop. Adjustable only in the still mode.

##### X2

Press ◀ or ▶ to clear out the noise bands that may appear during the x 2 playback mode. Adjustable only in the x 2 mode.

#### Note

The cursor position will change when the VTR's playback mode changes.



### Inserting a Subsidiary Picture in the Playback Picture — P in P

#### Calling-up the subsidiary screen

Press P in P during playback.  
When TUNER is selected with INPUT SELECT, the TV picture can be viewed in the subsidiary screen.

#### Changing the position of the subsidiary picture

Press SHIFT.  
The position will be shifted as illustrated.

#### Inverting the position of the subsidiary picture

Press P in P again.

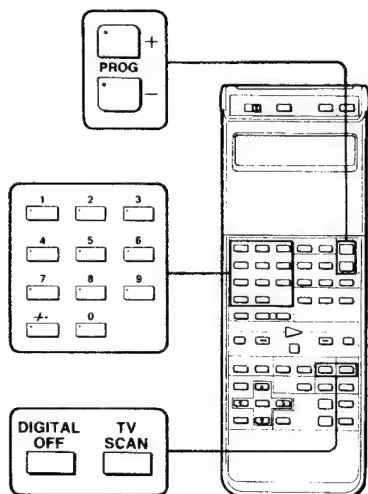
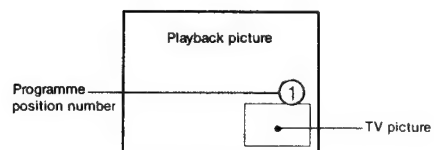
#### To turn off the subsidiary picture

Press DIGITAL OFF.  
The position of the subsidiary picture will be stored in the memory.

#### Sound during P in P

If VTR-TV connection is made via the MONITOR OUT jacks on the VTR:  
The sound of the main picture is output.

If VTR-TV connection is made via the LINE OUT jacks on the VTR:  
During playback, the sound of the playback picture of this VTR is output. In other modes, the sound of the input source selected on this VTR is output.



### Watching TV Channels in Succession — TV Scan

You can watch each TV programme for a few seconds, in the preset order, while playing back a tape.

#### Operation

**Press TV SCAN during playback.**

The TV programme will be displayed in the subsidiary picture for a few seconds with the programme position number. After all of the preset programmes are displayed, the first preset programme position will appear again.

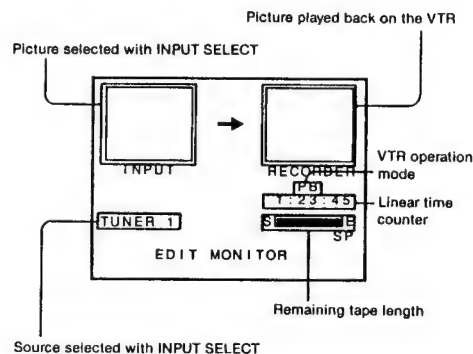
#### Watching the desired programme position in the subsidiary screen

Press the channel number button or press PROG (PROGRAM) + I-.

#### Turning off the subsidiary picture

After TV scanning is completed, press DIGITAL OFF.

During TV scanning, enter the programme position of the desired programme directly by the programme position number buttons on the Commander or the PROG(PROGRAM) + I- buttons.

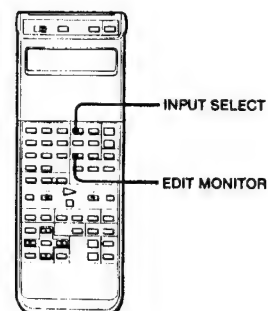
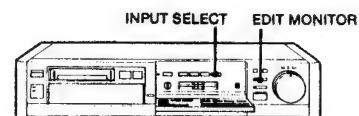


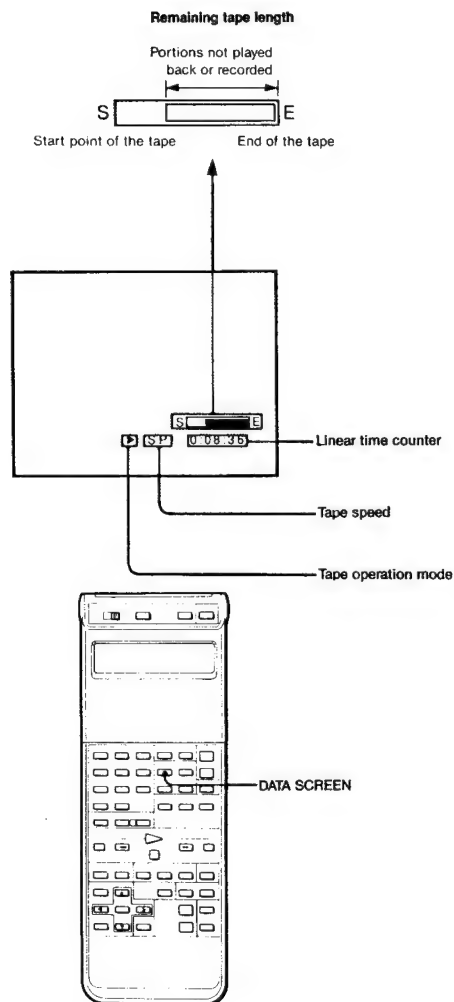
### Watching Two Pictures Simultaneously — EDIT MONITOR

Press EDIT MONITOR on the Commander or the VTR.

The playback picture of this VTR and the picture selected by the INPUT SELECT button can be viewed simultaneously in the EDIT MONITOR screen.

Refer to the "Editing" section for the convenient use of EDIT MONITOR screen during editing.





### Data Screen

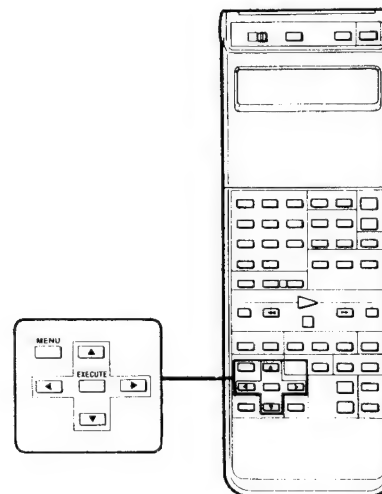
Data screen information illustrated on the left will automatically appear on the screen during playback or recording as a reference. Note, however, that the data screen will not be displayed when VTR — TV connection is made via the VIDEO LINE OUT jack of this unit.

**To erase or display the data screen**  
Press DATA SCREEN on the Commander.

**Note on the remaining tape length indicator**  
The remaining tape length indicator shows the approximate amount of tape left.

### AUTO MENU

▶ PLAY-REW-POWER OFF  
GO TO ZERO-STOP  
GO TO ZERO-PLAY  
REW-POWER OFF  
REW-EJECT-POWER OFF  
REW-PLAY  
REW-TIMER REC



### Assigning a Desired Operation Mode

Guided by the AUTO MENU, you can make the VTR enter the desired operational sequence automatically.

- 1 Press MENU.  
The main MENU appears.
- 2 Move cursor by using ▲ or ▼ to AUTO MENU.
- 3 Press EXECUTE.  
The AUTO MENU appears.
- 4 Move cursor by using ▲ or ▼ to the desired operational sequence.
- 5 Press EXECUTE.  
The selected operation will begin.  
The selected operation will be displayed on the screen for a few seconds.

### Auto Menu Modes

**PLAY - REW - POWER OFF** plays back the tape, rewinds the tape when the end is reached, and turns the power off.

**GO TO ZERO - STOP** searches for the counter zero point and stops. See page 69.

**GO TO ZERO - PLAY** searches for the counter zero point and starts playback. See page 70.

**REW - POWER OFF** rewinds the tape to the beginning and turns the power off.

**REW - EJECT - POWER OFF** rewinds the tape to the beginning, ejects the cassette, and turns the power off.

**REW - PLAY** rewinds the tape to the beginning and starts playback.

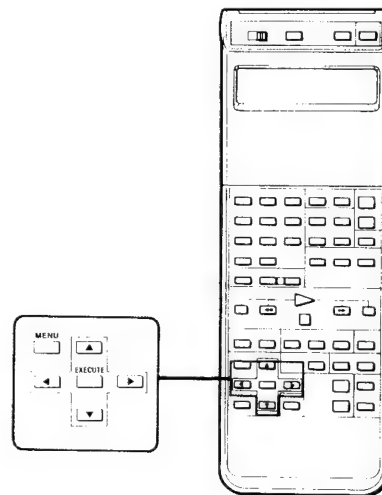
**REW - TIMER REC** rewinds the tape to the beginning and enters the timer recording standby mode for timer recording. A cassette with its red tab slid out will be ejected.

#### Note on REW - TIMER REC

If the VTR is in the timer recording standby mode, first press **TIMER REC (ON/OFF)** to cancel the standby mode, next turn on the power to the unit, then call up the **AUTO MENU** referring to the procedure on page 45.

#### FUNCTION MEMORY

PLAY-REW-POWER OFF  
GO TO ZERO-STOP  
GO TO ZERO-PLAY  
REW-POWER OFF  
REW-EJECT-POWER OFF  
REW-PLAY  
▶ [AUTO MENU]



### Assigning an Auto Menu Mode to the FUNCTION MEMORY Button

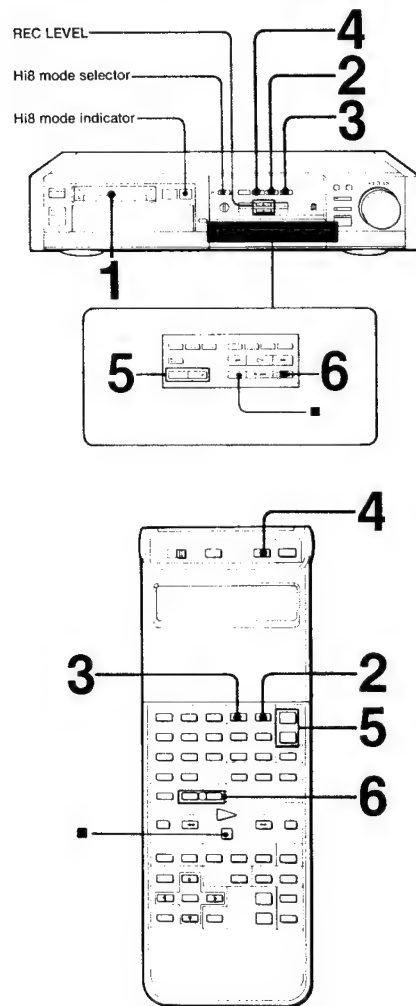
One of the AUTO MENU modes can be assigned to the FUNCTION MEMORY button on the Commander.

- 1 Press **MENU**.  
The main MENU appears.
- 2 Move cursor with **▲** or **▼** to **FUNCTION MEMORY**.
- 3 Press **EXECUTE**.  
The FUNCTION MEMORY menu appears.
- 4 Move cursor to the desired operational sequence.
- 5 Press **EXECUTE**.  
Now the selected operation is assigned to the FUNCTION MEMORY button. Every time FUNCTION MEMORY is pressed in the stop mode, the selected operation will begin.

If [AUTO MENU] is selected in step 4, AUTO MENU will be displayed immediately when FUNCTION MEMORY is pressed, providing a direct access to the AUTO MENU.



## Recording TV Programmes



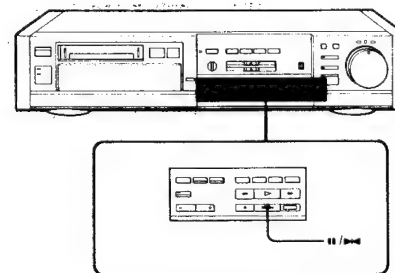
### Before You Begin

- Check that all of the connections are complete.
- Turn on the TV and select the video input on the TV or select the programme position for the recorder.
- Check the Hi8 indicator when using a Hi8 tape. Turn it on to record in the Hi8 mode. Turn it off to record in the standard 8 mm mode.
- Set the REC LEVEL controls to the appropriate level. (see page 52).
- Data screen displays will not be recorded.

### Operation

- 1 Insert a cassette.  
The power will automatically be turned on.
- 2 Select the recording speed, SP or LP, with REC MODE.
- 3 Press INPUT SELECT so that the TUNER indicator appears in the display window.
- 4 Press TV/VTR so that the VTR indicator is turned on in the display window (only when TV — VTR connection is made via the AERIAL OUT socket on the VTR).
- 5 Select the programme position to be recorded with PROG (PROGRAM) + / -.
- 6 Press the right button while pressing ● REC on the Commander, or press the ● REC button on the unit.  
Recording will begin.

**To stop recording**  
Press ■ STOP.



### To Cut Out Scenes by Recording Over It

#### Overview

Using the recording pause mode, you can stop recording when an unwanted scene appears and then resume recording smoothly. Moreover, utilizing the SHUTTLE EDIT buttons on the Commander or the EDIT SHUTTLE on the VTR, it is possible to cut out unwanted scenes by rewinding and/or advancing the tape, then entering the recording pause mode, and resume recording smoothly.

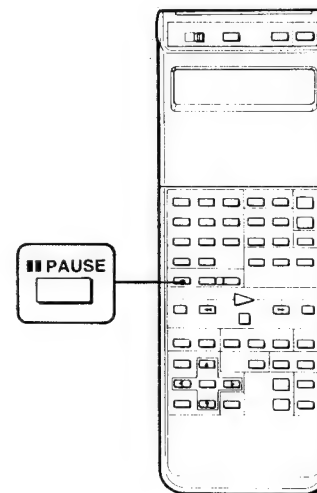
#### Operation

##### Basic

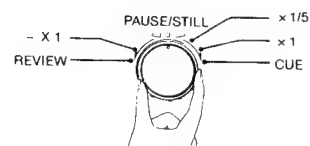
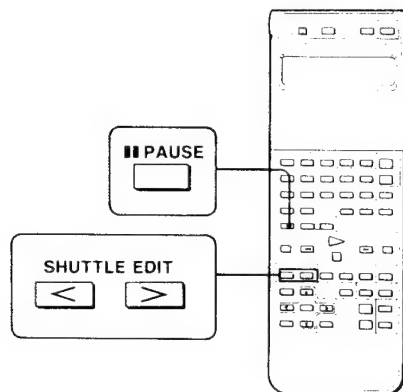
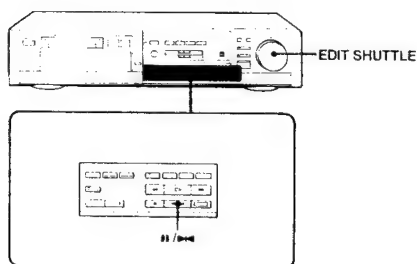
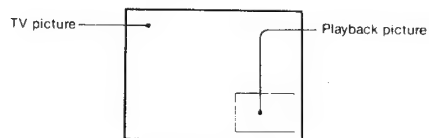
- 1 While recording, press ■ PAUSE on the Commander or ■ PAUSE/STILL on the VTR. The VTR will enter the recording pause mode.
- 2 Press ■ PAUSE at the desired point to continue recording.

#### Note

To protect the tape and video heads, the pause mode will be automatically released after about 7 minutes and the VTR will enter the stop mode.



## Recording TV programmes



### Advanced

**1** While recording TV broadcasts, press **PAUSE** on the Commander or **PAUSE/STILL** on the VTR.

The VTR will enter the recording pause mode.

**2** Rewind the tape with **SHUTTLE EDIT < or >** on the Commander or **EDIT SHUTTLE** on the VTR to locate the point to resume recording. A P in P screen will be appear and the playback picture can be viewed in the subsidiary display.

Using the **SHUTTLE EDIT < or >**:

Press **<** to reverse the picture (x 1 speed).  
Press **>** to advance the picture (x 1 speed).

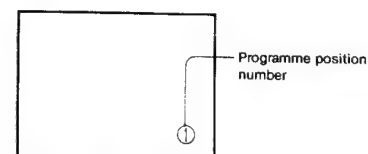
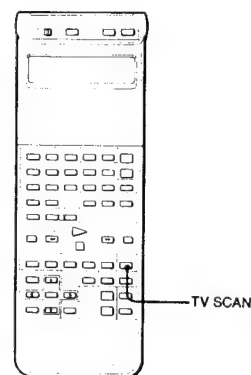
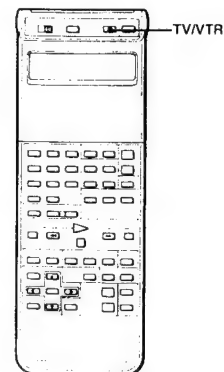
Using the **EDIT SHUTTLE**:

Turn to the left to search in reverse.  
Turn to the right to search in forward.  
The playback speed is as indicated in the illustration.

**3** Release the **SHUTTLE EDIT** button or the **EDIT SHUTTLE** at the desired point.

The subsidiary screen will be cleared and the VTR enters the recording pause mode after approximately 2 seconds.

**4** Press **PAUSE** on the Commander or **PAUSE/STILL** on the unit when you wish to resume recording.



## Watching a TV Broadcast While Recording

*If VTR-TV connection is made using the **MONITOR OUT EURO-AV***

Press **TV/VTR** to turn off the VTR indicator. The programme selected on the TV appears on the screen.

*If VTR-TV connection is made using the **LINE OUT VIDEO/S VIDEO/AUDIO or MONITOR OUT S VIDEO** jacks*

Press **TV/VTR** to turn off the VTR indicator. Select the tuner input on the TV and change the programme position on the TV.

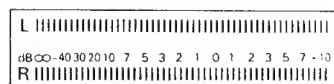
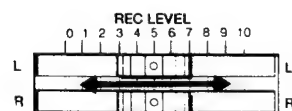
*If VTR-TV connection is made using the **AERIAL** sockets*

Press **TV/VTR** to turn off the VTR indicator and change the programme position using the programme position number buttons on the TV.

## To Scan TV Programmes

While viewing TV programmes, press **TV SCAN**. You can watch each TV programme for a few seconds in the order that you have preset them.

## Recording Level Adjustment



Adjust the REC LEVEL controls to record in the appropriate audio level referring to the peak programme meter in the display window.

### Appropriate Recording Level

#### Recording sources with medium or lower frequency signals (e.g. vocals)

Adjust so that the element at the 0dB level lights at the highest signal level.

#### Recording sources with medium or high frequency signals (e.g. trumpets, treble sound of violins)

Adjust so that the element at the -1 to -3dB level lights at the highest level.

#### Notes

- During playback, the peak programme meter shows the peak of the recording sound.
- After recording, it is recommended that the REC LEVEL controls are set to the minimum levels for playback. These controls do not affect the volume during playback but noise may occur when playback is stopped and this may damage the speakers, if connected.

## Recording Stereo/Bilingual Programmes

### MODE SET

X2 AUDIO	• ON	OFF
LANC MODE	M	S
SHUTTLE MODE	A	B
AUDIO LINE IN	• ST	BIL
PFS	ON	OFF
VPS	• ON	OFF
▶ AUTO STEREO	• ON	OFF
COLOUR SYSTEM	• AUTO	PAL

### EV-S1000E

The EV-S1000E receives and records stereo/bilingual programmes based on the "Zweiton" system adopted in West Germany. To receive "Zweiton" broadcasts, select AUTO STEREO ON in the MODE SET menu (page 30).

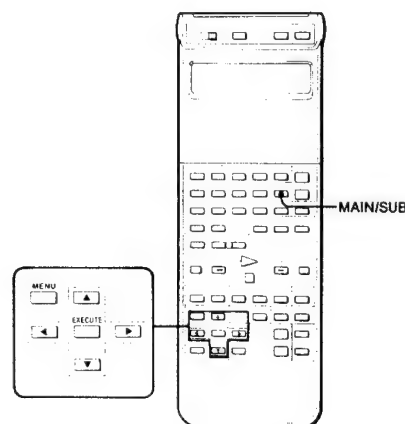
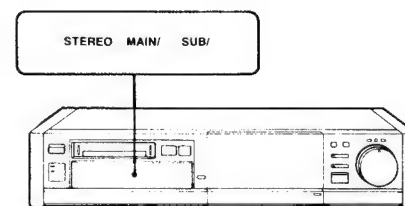
### Stereo programmes

When a stereo programme is received, the STEREO indicator appears in the display window. The MAIN/SUB button does not function for the stereo programme of the Zweiton system.

### Bilingual programmes

When a bilingual programme is received, MAIN/ appears in the display window. If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

Display	Sound to be heard
MAIN/	Main sound
SUB/	Sub sound
MAIN/ SUB/	Main sound on the left channel and sub sound on the right channel



## Recording Stereo/Bilingual Programmes

### To record

A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as listed below, regardless of the sound being monitored.

Track		Sound to be recorded	
		Stereo	Bilingual
PCM and Standard (Hi-Fi)	Left channel	Left channel	Main
	Right channel	Right channel	Sub

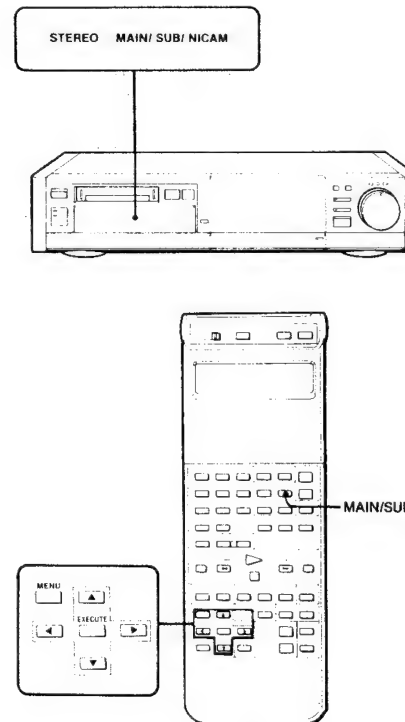
### To record

A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as follows, regardless of the sound being monitored.

Track		Sound to be recorded	
		Stereo	Bilingual
PCM and Standard (Hi-Fi)	Left channel	Left channel	Main
	Right channel	Right channel	Sub

**Understanding the NICAM broadcast**  
NICAM broadcasting has two-channel digital sounds called NICAM L and R channels in addition to the standard sound. The NICAM L and R are assigned to the stereo left and right channels or the main and sub sounds of a bilingual programme. The standard sound of most NICAM broadcasts is the mixed sound of the left and right channels for a stereo programme, and the main sound for a bilingual programme.

MODE SET  
X2 AUDIO •ON OFF  
LANC MODE M •S  
SHUTTLE MODE •A B  
AUDIO LINE IN •ST BIL  
PFS •ON OFF  
TIMER TITLE •ON OFF  
▶NICAM •ON OFF



### EV-S1000E (UK)

The EV-S1000E (UK) receives and records stereo/bilingual programmes based on the "NICAM" system adopted in the United Kingdom. To receive "NICAM" broadcasts, select NICAM ON in the MODE SET menu. If you do not wish to record in the NICAM system, select NICAM OFF in the MODE SET menu (page 30).

### Stereo programmes

When a stereo programme is received, STEREO and NICAM indicators appear in the display window.

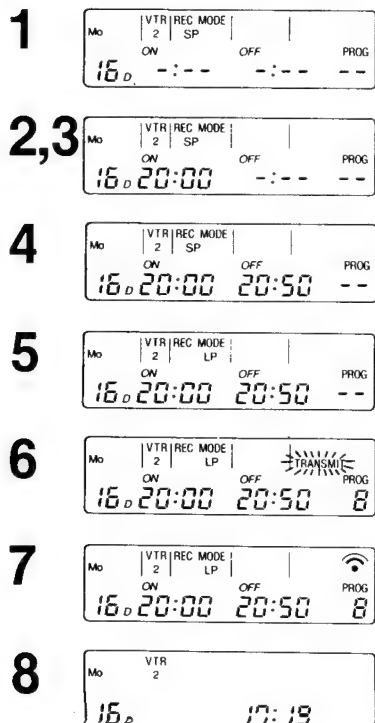
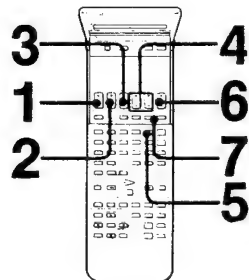
Display	Sound to be heard
STEREO NICAM	Left channel sound on the left channel Right channel sound on the right channel

### Bilingual programmes

When a bilingual programme is received, NICAM and MAIN/ appears in the display window. If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

Display	Sound to be heard
MAIN/ NICAM	Main sound
SUB/ NICAM	Sub sound
MAIN/ SUB/ NICAM	Main sound on the left channel Sub sound on the right channel

## Timer Recording



### Timer Recording on this VTR

Up to six preselected programmes, can be set on this unit, up to one month in advance.

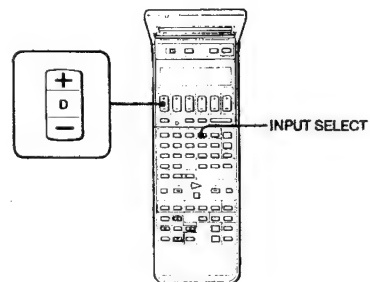
#### Before You Begin

- Turn on the TV and adjust it to view the VTR picture.
- Check to see that the clock on the Commander and the VTR show the present time.
- To operate the EV-S1000E read "VPS Function" first.

#### Operation

Example: To record a programme broadcast from 20:00 to 20:50 on Monday, July 16, 1990 on programme position 8 in the LP mode.

- 1 Open the cover of the Commander and press D until 16 appears.  
The day of the week, Mo (Monday), is automatically set.
- 2 Set the recording start hour with TURN ON H.
- 3 Set the recording start minute with TURN ON M.
- 4 Set the recording end hour and minute with TURN OFF H and M.
- 5 Set the recording mode, SP or LP with the REC MODE button.
- 6 Set the programme position with the PROG button.  
The TRANSMIT indicator blinks to indicate that all of the items are entered.
- 7 Point the Commander to the VTR and press TRANSMIT.  
With a beep sound, the VTR enters the recording standby mode. The PROGRAM LIST appears on the screen for a few seconds.
- 8 Close the cover of the Commander so that the present time appears on the LCD display.  
The VTR turns on, starts recording at the selected time, and turns off after recording ends.



### To Set Other Programmes

Repeat steps 1 to 6 before step 7.

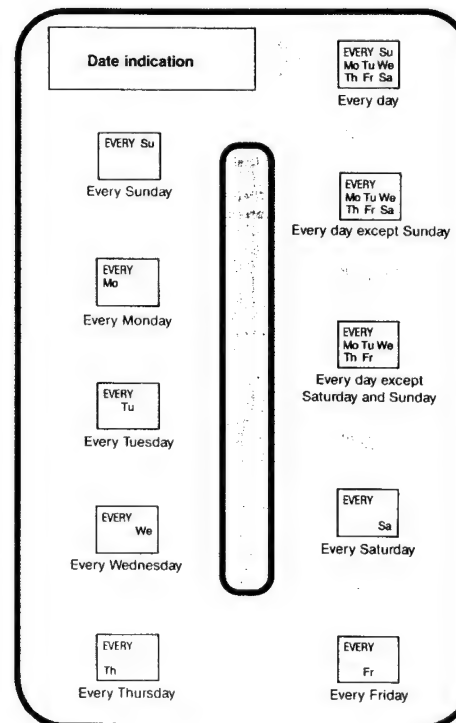
### To record from equipment connected to LINE IN VIDEO/AUDIO/S VIDEO 1 or 2 jacks

Press INPUT SELECT in step 5 to change the indication from PROG — to LINE L1 or LINE L2.

### Daily/Weekly Recording

This VTR can be preset to record the same programme each day of the week (daily recording) or the same programme on a specific day of every week.

Instead of step 1 in the "Operation", press D — on the Commander to change the LCD display in the order shown in the illustration. When the desired recording mode is set and transmitted to the VTR, the corresponding indicator lights in the display window.



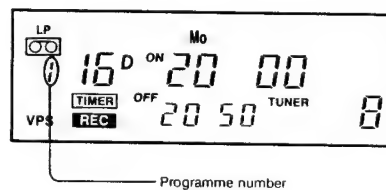
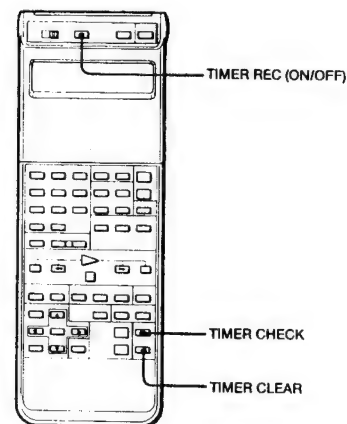
- If a short beep sounds repeatedly when TRANSMIT is pressed**  
A short beep indicates that the transmission is not received by the VTR. Press TRANSMIT again before closing the cover, then check the items below.
- An illogical setting has been made.
  - Timer setting can only be performed when the VTR is turned off, or in the stop, or timer recording mode.
  - Six timer settings have already been made.
  - The tape is at its end.

### Checking the Timer Settings

The timer settings can be checked by displaying the PROGRAM LIST on the screen. If the power to the VTR turned on, simply press TIMER ON SCREEN. If the VTR is in the timer recording standby mode, follow the procedure below.

- 1 Press **TIMER REC (ON/OFF)** to turn off the **TIMER REC** indicator in the display window.
- 2 Turn on the VTR and press **TV/VTR** to light the VTR indicator.
- 3 Turn on the TV.  
Set to the programme position for VTR playback if the VTR — TV connection is made via the AERIAL OUT socket on the VTR. Select VTR input on the TV if the VTR — TV connection is made via MONITOR OUT EURO-AV/S VIDEO or LINE OUT VIDEO/AUDIO/S VIDEO jacks.
- 4 Press **TIMER ON SCREEN**.  
The PROGRAM LIST display appears on the screen.
- 5 Press **TIMER ON SCREEN** again to return to the original screen.
- 6 Press **TIMER REC (ON/OFF)** to return to the timer recording standby mode.

PROGRAM LIST VPS 16.7 MON				
DATE	ON	OFF	PROG	
16.7 MON	20:00	20:50	8 LP	
27.7 FRI	12:00	14:15	L2 LP	
MON - SAT	23:00	23:15	6 LP	
MON - FRI	8:15	8:30	1 SP	
SUN - SAT	21:00	22:55	10 LP	
EVERYSAT	20:00	20:55	8 LP	



### Clearing/Correcting the Timer Setting

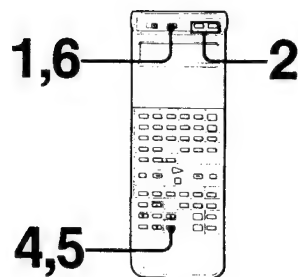
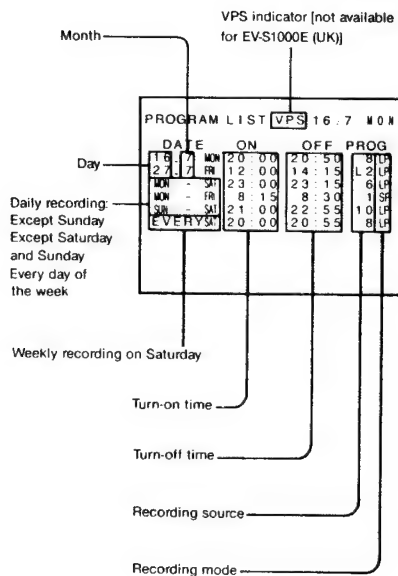
#### Referring to the PROGRAM LIST

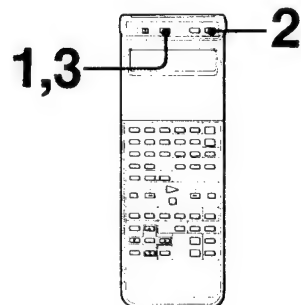
- 1 Display the **PROGRAM LIST** referring to steps 1 to 4 in "Checking the Timer Settings."
- 2 Press **TIMER CHECK** to call up the cursor on the screen and move the cursor to the setting you want to correct or clear.
- 3 To clear the setting, press **TIMER CLEAR**.  
If there are other timer settings on the **PROGRAM LIST** display, press **TIMER REC ON/OFF** to return to the timer recording standby mode.

To correct the setting, re-enter all of the items using the Commander. Refer to "Timer Recording — Operation" steps 1 to 7.  
In this case, the VTR automatically enters the timer recording standby mode.

#### Clearing the setting without the PROGRAM LIST

- 1 Press **TIMER REC (ON/OFF)**.
- 2 Press **TIMER CHECK** repeatedly until the desired programme appears.
- 3 Press **TIMER CLEAR**.
- 4 Press **TIMER REC (ON/OFF)** to return to the timer recording standby mode if there are other programmes set for timer recording.





## Using the VTR during Timer Recording Standby Mode

- 1 Press **TIMER REC (ON/OFF)** to turn off the **TIMER REC** indicator.
- 2 Turn on the power of the VTR.  
The VTR is ready to be used.
- 3 After using the VTR, press **TIMER REC (ON/OFF)** and turn on the **TIMER REC** indicator to re-enter the standby mode for timer recording.

## When the Timer Settings Overlap

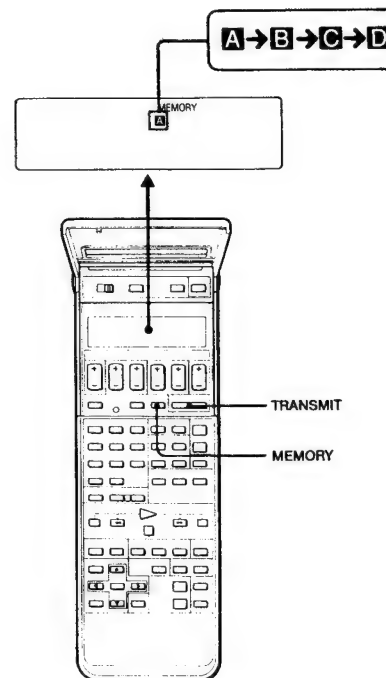
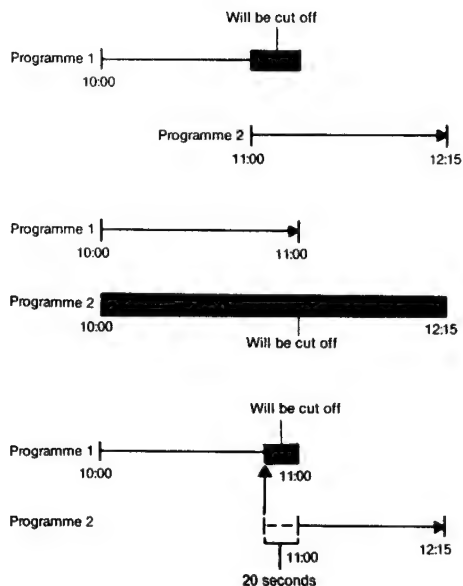
**If the setting of two programmes overlap**  
The recording of the following programme will begin automatically before the proceeding programme ends.

**If the turn on time of two programmes are the same**

The VTR will record the programme with the smaller programme number or listed first on the programme list.  
The programme with the larger programme number or listed lower in the list will be cleared from the programme list.

**If the recording end time of programme 1 and the recording start time of programme 2 are the same**

The last 20 seconds of programme 1 will not be recorded because the VTR will enter the recording pause mode for programme 2 before programme 1 ends.



## To Store the Frequently Used Items in the Commander

The items selected for one timer recording programme will be erased from the LCD when the Commander cover is closed. It will be cleared from the programme list when recording is over. However, the turn-on/turn-off time and the programme position of up to four programmes can be stored in the Commander to be recalled later. This enables you to quickly access the most frequently used items, especially your favorite weekly programmes. The recording date will automatically be shifted to the next week after the recording is over.

## Operation

**Example:** To store a timer recording data in **MEMORY A**.

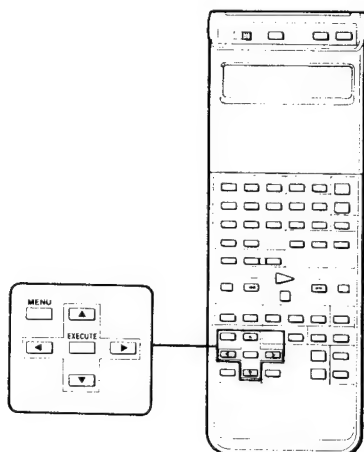
- 1 Press **MEMORY** to indicate **MEMORY A**.
- 2 Set all of the items for timer recording referring to "Timer Recording — Operation."
- 3 Press **MEMORY** to change the indication to B, C, or D, and repeat step 2 for other programmes.  
The items set will be kept in the memory even when the Commander cover is closed.

## Recalling and changing the items

- 1 Press **MEMORY** to call up the desired memory indication (A, B, C, or D).
- 2 Make whatever changes necessary.
- 3 Press **TRANSMIT**.  
The VTR enters the timer recording standby mode.

## Timer Recording

MODE SET			
X2 AUDIO	•ON	OFF	
LANC MODE	M	•S	
SHUTTLE MODE	•A	B	
AUDIO LINE IN	•ST	BIL	
PFS	ON	•OFF	
▶TIMER TITLE	•ON	OFF	
NICAM	•ON	OFF	



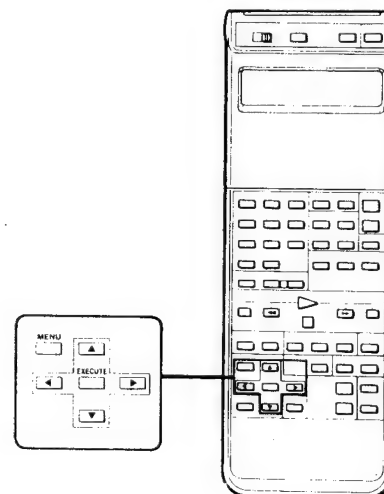
16. 7.1990 MON  
20:00 - 20:55  
PROG8 LP

### Recording a Timer Title

A timer title screen consisting of the recording start/end time, date of recording, and the programme position can be recorded on the tape for 3 seconds before the timer recording. The timer title is convenient for locating the beginning of a desired programme when several programmes are recorded on a single tape. Note that the timer title will be automatically recorded for EV-S1000E but will be turned off when using the VPS function. For EV-S1000E (UK), the timer title recording can be turned on and off by following the procedure below.

- 1 Before setting the timer, press MENU.  
The main MENU appears.
- 2 Move cursor with ▲ or ▼ to MODE SET.
- 3 Press EXECUTE.  
The MODE SET menu appears.
- 4 Move cursor with ▲ or ▼ to TIMER TITLE.
- 5 Press ◀ or ▶ to select ON to record the timer title, and OFF to record without timer title.
- 6 Press EXECUTE to store the setting.  
If ON is selected in step 5, the timer title will automatically be recorded before the timer recording starts.

MODE SET			
X2 AUDIO	•ON	OFF	
LANC MODE	M	•S	
SHUTTLE MODE	•A	B	
AUDIO LINE IN	•ST	BIL	
PFS	ON	•OFF	
▶VPS	•ON	OFF	
AUTO STEREO	•ON	OFF	
COLOUR SYSTEM	•AUTO	PAL	



### VPS (Video Programme System) Function — not available for EV-S1000E (UK)

The German broadcasting system transmits VPS signals with the TV programmes which assures that your timer recording will be performed without missing any portion of it regardless of any changes in broadcasting time, extension, or broadcast interruption which might occur before or during that programme.

#### Operation

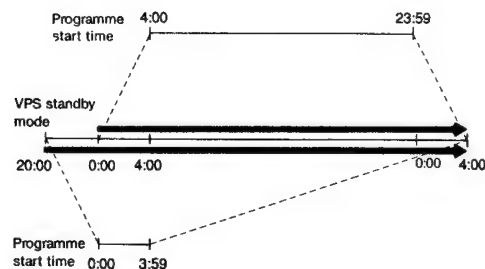
- 1 Check whether VPS is transmitted with the programme to be recorded.
- 2 Call up the MODE SET menu referring to "Mode Setting" on page 30.
- 3 Select VPS ON so that the VPS indicator lights in the display window.
- 4 Set the timer referring to "Timer Recording — Operation."

#### Notes

- The VPS function can be turned on only when the TIMER REC indicator is turned off.
- If the VPS signal was not received on the VTR because it was too weak or because the station failed to transmit, timer recording will be performed without the VPS function regardless of the VPS indication.
- The recording will stop when the VTR receives a VPS programme interruption code during recording, for example, when an urgent news bulletin was inserted. As soon as the interrupted programme resumes, recording will continue.



## Timer Recording



### VPS Standby Mode

The VTR will be turned on to standby for VPS recording before the turn-on time and remains turned on past the preset turn-on time until the VPS signal is received to prepare for any change in the actual broadcast time.

**When the VPS timer recording is set for a programme which is expected to start between 4:00 and 23:59?**

The VTR will be turned on at 0:00 that day and will keep on waiting for the VPS signal until 4:00 of the next day.

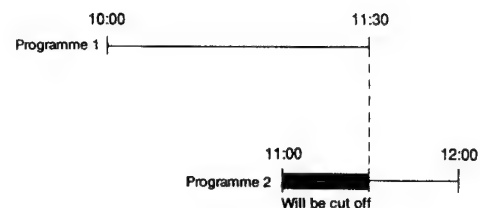
**When the VPS timer recording is set for a programme which is expected to start between 0:00 and 3:59?**

The VTR will be turned on at 20:00 the day before the recording day and will keep on waiting for the VPS signal until 4:00 on the next day.

### If the actual recording time overlaps with the next timer recording programme

There may be cases when the actual broadcast time of two timer recording programmes overlap owing to the shift made by the VPS signal. In this case, the programme that was broadcast first always has priority.

The recording of the second programme will begin only after the first programme is over.



## Quick Timer Recording

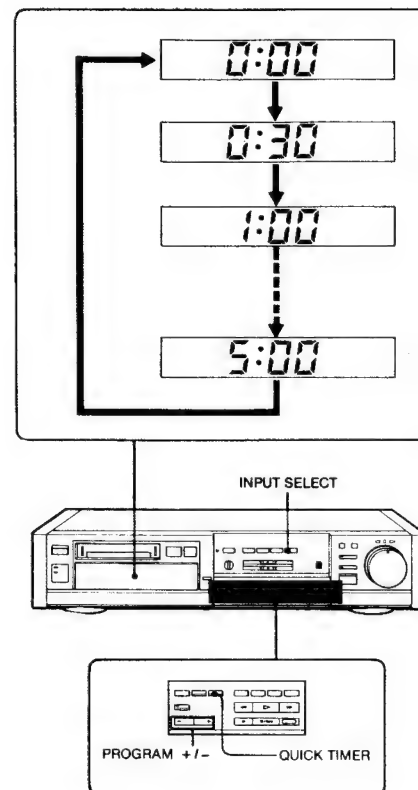
### What is Quick Timer Recording?

With the quick timer recording function, simple and rough timer recording can be made. The timer can be set to operate within 5 hours in units of 30 minutes.

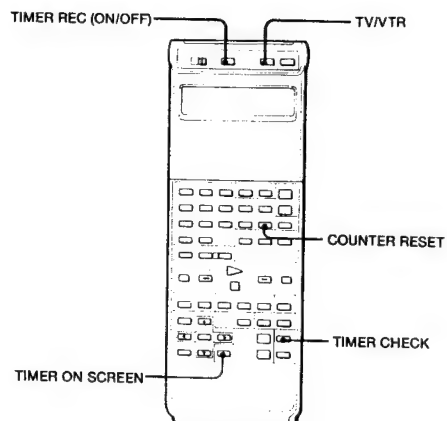
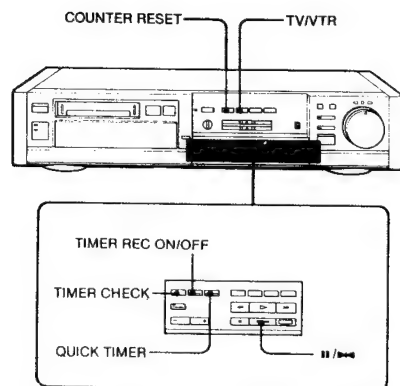
### Operation

If you are recording, skip steps 1 to 3.

- 1 Press INPUT SELECT so that TUNER indicator is turned on.
- 2 Insert a cassette.
- 3 Press QUICK TIMER. TIMER indicator lights in the display window.
- 4 Select the desired programme position with PROG (PROGRAM) + / - while 0:00 and the programme position number are blinking in the display window.
- 5 Press QUICK TIMER again to start recording.
- 6 Press QUICK TIMER again to set the recording duration. Press within 30 seconds from step 3, otherwise the power will be turned off. Each press of QUICK TIMER changes the indication in the display window in units of 30 minutes.
- 7 The recording duration will decrease minute by minute until 0:00 when the VTR will be automatically turned off.



## Quick Timer Recording



### Buttons operable during quick timer recording

- **11/24h** stops quick timer recording momentarily.
- **TIMER REC ON/OFF** stops timer recording.
- **QUICK TIMER** changes the recording duration.
- **TIMER ON SCREEN** displays the PROGRAM LIST.
- **TIMER CHECK** moves the cursor in the PROGRAM LIST or changes the programme number in the display window.
- **COUNTER RESET** resets the counter to zero.
- **TV/VTR** switches the screen to another programme received on the TV.

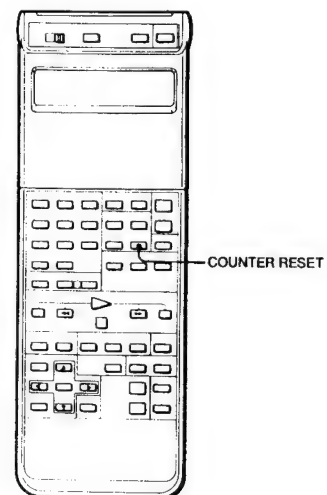
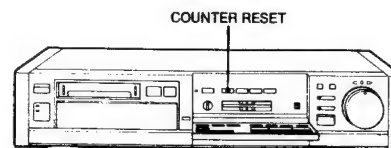
### If power interruption occurs during quick timer recording

Recording will stop and the VTR will be turned off. If the power interruption lasted for less than one hour, and if the power recovered within the quick timer duration, recording will resume from that instant.

### If the unit is in the time recording standby mode

Press **TIMER REC ON/OFF** to turn off the **TIMER REC** indicator, then press **QUICK TIMER**.

## Use of the Tape Counter



### Understanding Counter Zero Position

The tape counter on this VTR can be used as a reference when you wish to locate a certain scene after recording or playback. Press **COUNTER RESET** to set the counter to "0H00M00S" (counter zero position) before operation. The VTR will keep counting the length of tape being played back or recorded.

### Tape Return

The VTR can search for the counter zero position and stop. This function is useful for locating a particular scene after recording or playback.

- 1 Press **COUNTER RESET** at the desired scene during recording or playback.
- 2 Press **■** to stop after recording or playback.
- 3 Press **MENU** and select **AUTO MENU**. See "Assigning a Desired Operation Mode" (page 45) for operation.
- 4 Move cursor to "GO TO ZERO — STOP."
- 5 Press **EXECUTE**.

### AUTO MENU

PLAY-REW-POWER OFF  
▶ GO TO ZERO-STOP  
GO TO ZERO-PLAY  
REW-POWER OFF  
REW-EJECT-POWER OFF  
REW-PLAY  
REW-TIMER REC

## Index Function

### AUTO MENU

PLAY-REW-POWER OFF  
GO TO ZERO-STOP  
▶ GO TO ZERO-PLAY  
REW-POWER OFF  
REW-EJECT-POWER OFF  
REW-PLAY  
REW-TIMER REC

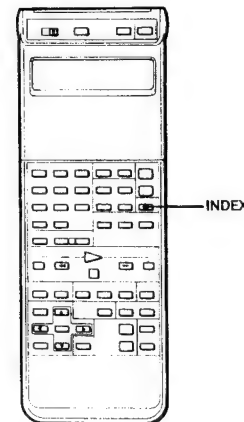
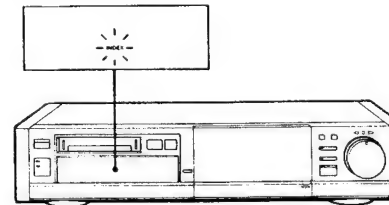
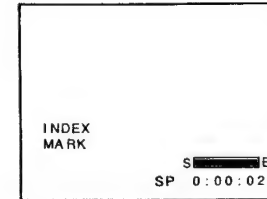
### Tape Return Play

The VTR will even search and start playback from the counter zero position after recording or playback.

- 1 Repeat steps 1 to 3 in the "Tape Return" operation.
- 2 Move cursor to "GO TO ZERO — PLAY"
- 3 Press EXECUTE.

### Notes

- The counter reading and the point on the tape may not correspond exactly. Use the counter as a reference.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward or rewind operations.
- There will be a time lag of several seconds when a tape recorded in LP and SP mixed or a tape with blank portion between recordings is played back.
- If tape return or tape return play is operated within  $\pm 1$  minute, it may take extra time to search for the 0H00M00S point.
- The tape will stop at the approximate "0H00M00S" point during tape return operation.



### Marking Index Signals

The desired position on a tape can be located easily by detecting the index signals. There are two ways in which to mark index signals, automatic and manual.

When the index signal is being marked, INDEX flashes in the display window and INDEX MARK lights on the TV screen.

#### Automatic index mark

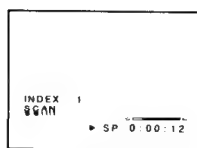
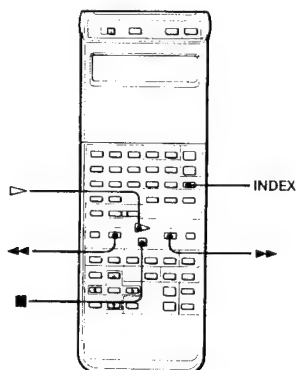
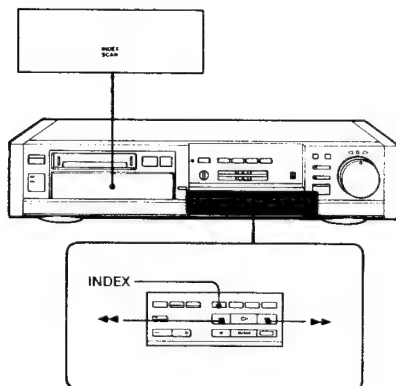
An index signal is automatically marked on the tape when the VTR starts recording.

#### Manual index mark

Index signals can be marked at desired scenes during recording or playback. Press INDEX MARK to mark an index.

### Notes

- Leave an interval of more than 2 minutes between two index points so that the VTR can detect each INDEX signal accurately.
- The sound recorded on the tape will not be heard and a black bar appears at the bottom of the picture while the index signal is being marked during playback. However, the recorded signals are not affected.
- When the EDIT indicator is turned on in the display window, marking or erasing of index signals cannot be performed.
- Index signals cannot be marked on a tape whose safety tab is slid out.



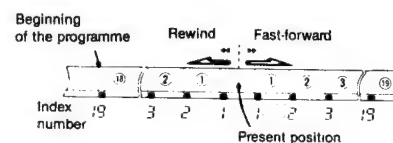
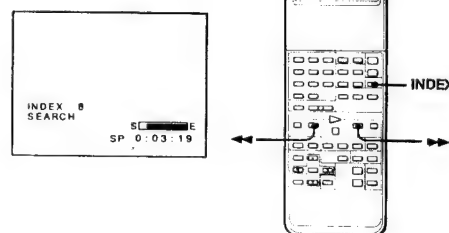
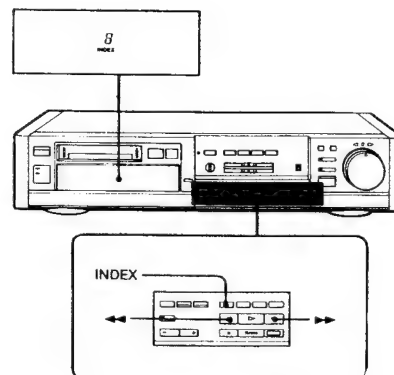
### To Scan the Index Points — INDEX SCAN

To scan the beginning of each index point while monitoring the picture

- 1 Insert a cassette with index signals marked.
- 2 Press INDEX in the playback or playback pause mode.
- 3 Press ►► to advance and ◄◄ to go back to the next index.  
The tape will be scanned forward with ►► and scanned in reverse with ◄◄ to the next index point and will be played back for approximately 10 seconds.
- 4 To continue playback, press ►►.  
When no button is pressed, the picture is automatically scanned to the next or previous index.

To scan the beginning of each index point without viewing the picture

- 1 Insert a cassette with index signals.
- 2 Press INDEX in the stop mode.
- 3 Press ►► to advance and ◄◄ to go back to the next index.  
The tape will be advanced with ►► and rewind with ◄◄ to the index mark point without picture on the screen and then will be played back for approximately 10 seconds.
- 4 Press ►► to continue playback from that index point.  
When no button is pressed, the picture will be automatically scanned to the next or previous index.



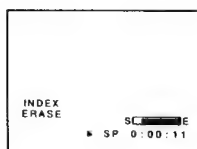
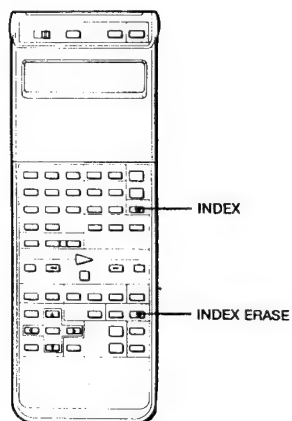
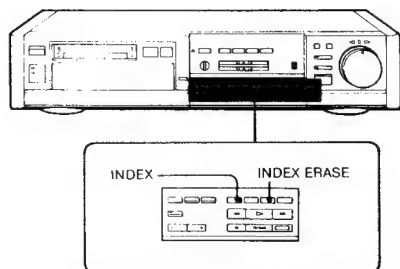
### To Search for the Index Point — INDEX SEARCH

Direct search of the desired index point can be performed by assigning the number of how many indexes ahead or behind it is from the current tape position. Up to 19 indexes from the current position can be searched for.  
The VTR counts down how many more indexes should be searched for and displays the number on the TV screen and in the display window.

- 1 Insert a cassette with index signals.
- 2 Press INDEX in the stop or playback or playback pause mode.
- 3 Press INDEX again until the number of indexes that should be counted to reach the desired scene is displayed on the TV screen and the display window.
- 4 Press ◄◄ if the index is behind or ►► if the index is ahead of the current tape position.  
The VTR starts searching and the index number will be counted down to zero. Playback starts.

To correct the index number  
Press ■ and repeat steps 2 to 4 above.

## Index Function



### Erasing an Index

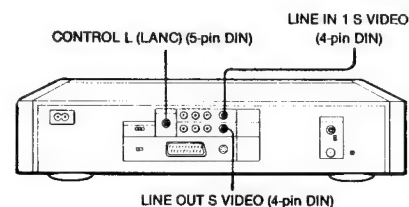
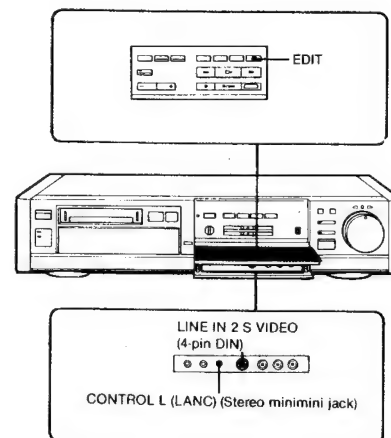
The index marked on the tape can be erased.

- 1 Insert a cassette with index signals.
- 2 Locate the index to be erased by index scan or index search.
- 3 Within approximately 10 seconds, while the tape is being played back, press INDEX ERASE. When the index signal is erased during index scan mode, index scan will resume. When the index signal is erased during index search mode, normal playback will begin.

#### Notes

- Press INDEX ERASE more than 2 seconds after the playback starts.
- If the safety tab on the cassette is slid out, the index signal cannot be erased.
- While an index signal is being erased, the original sound recorded on the tape cannot be heard and a black bar appears at the bottom of the playback picture. However, recorded signals are not affected.
- When the EDIT indicator is turned on in the display window, marking or erasing of index signals cannot be performed.
- The index signals marked by a VTR such as the EV-S850 series can be detected with this unit but cannot be erased. The index signals marked by this unit can be detected with a VTR such as the EV-S850 series but cannot be erased.
- When the audio is dubbed in the portion where an index was marked, the index signal may be erased.

## Before Editing



You can create your own video programme by editing with other VTRs. Take a look at the following examples to expand your pleasure in video operation.

### Use of the EDIT mode

The EDIT mode activated by the EDIT button on the unit enables playback of a higher quality picture during editing. If your other VTR is equipped with this function, turn it on. However, note that even when using the EDIT mode during editing, the quality of the edited tape will have a certain extent of degradation in picture and sound. Avoid using the edited tape for multiple generations of editing.

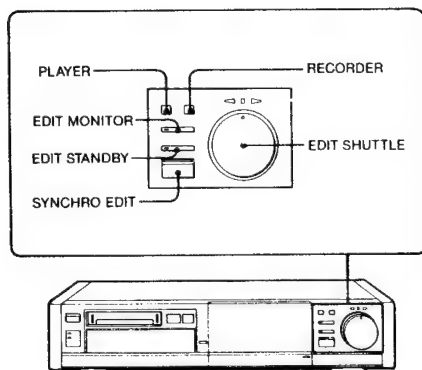
### Use of the CONTROL L (LANC) connector

If your second VTR is equipped with a Sony control terminal LANC CONTROL L connector (stereo minimini jack or 5-pin DIN type), synchronized editing can be performed. The second VTR can be remotely controlled with this VTR by using the editing section on the front panel. Refer to the following example for the actual settings and operation to perform synchronized editing.

### Use of the S VIDEO jacks

Check whether your second VTR is equipped with S VIDEO input or output jacks. Use of the S VIDEO jacks will result in higher quality edited picture.

## Before Editing



### Useful Functions during Synchronized Editing

#### EDIT SHUTTLE

Enables quick access to the desired scene, both on the recorder and the player.

#### PLAYER/RECORDER buttons and indicator

Turns on to indicate which VTR should be controlled by the EDIT SHUTTLE.

#### EDIT MONITOR button

Displays the picture of the recorder as well as the input source on the screen.

#### EDIT STANDBY button


Automatically displays the EDIT MONITOR screen with the recorder in the recording pause mode and the player in the playback pause mode. LINE IN 2 will be automatically be selected as the input source.

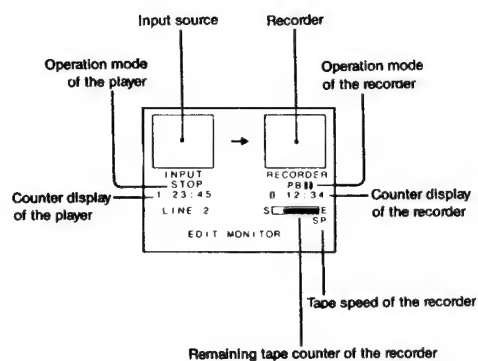
#### Note

When controlling the other VTR with the EDIT SHUTTLE, turn the EDIT SHUTTLE slowly not to go past the desired tape speed position.

### EDIT MONITOR Display during Editing

#### Notes

- The cable with an \* (asterisk) is optional.
- The  mark indicates the signal flow.

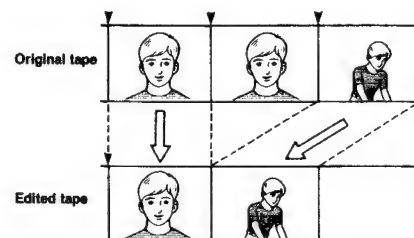


### Various Tape Editing Methods

Various methods for easy and accurate tape editing are available with the VTR. Select the method according to your purpose and to the video/audio equipment you are using.

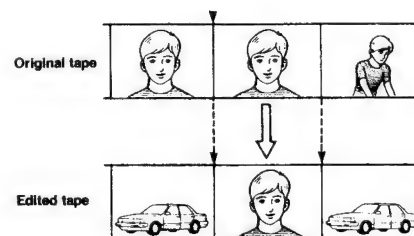
#### Assemble Editing

Only the desired portions of an original tape can be edited onto another tape, one portion at a time.



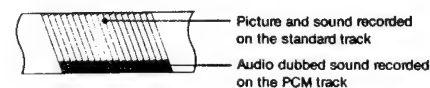
#### Insert Editing

A prerecorded portion of a tape can be replaced with a new scene. Decide the start point and the end point on the recording VTR.



#### Audio dubbing

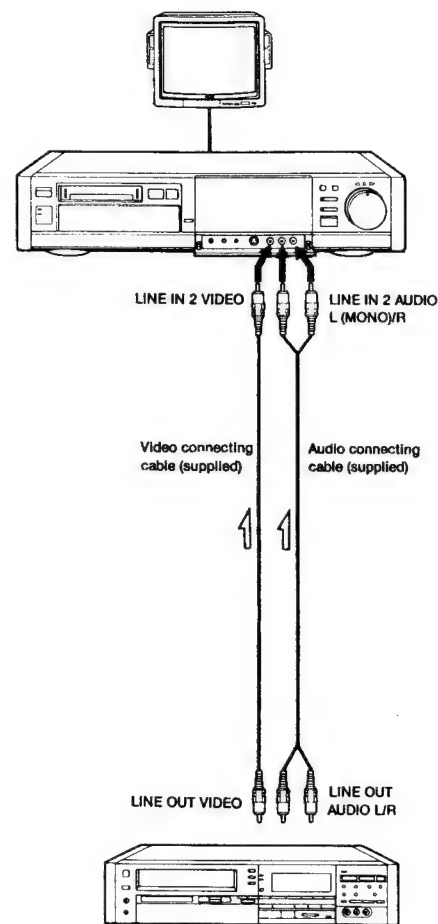
The sound recorded on the PCM audio track can be replaced with a new sound without changing the picture and sound recorded on the standard track.



#### Notes

- The picture may be distorted at the end point of an insert editing.
- Playback in various speeds may be distorted when edited from or onto another VTR.

Editing Method	P: player R: recorder	Page
Basic Editing	P: VTR R: This VTR	79
	P: This VTR R: VTR	80
Assemble Editing (Using the Synchronized Editing Function)	P: 8 mm camera recorder with REMOTE (stereo minimini) jack R: This VTR	81
	P: 8 mm or VHS VTRs with a CONTROL L (LANC) (5-pin DIN) connector R: This VTR	84
Insert Editing (Using the Synchronized Editing Function)	P: 8 mm camera recorder with REMOTE (stereo minimini) jack R: This VTR	87
Manual Assemble Editing	P: VTR R: This VTR	90
Manual Insert Editing	P: VTR R: This VTR	92
Audio Dubbing	P: a) Audio system b) Microphone R: This VTR	94



## (1) Editing a Tape from Another VTR

## Connection

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

## Preparation

## On the other VTR = player

- Activate the EDIT mode if it is equipped.

## On this VTR = recorder

- Select the line input that the player is connected to with INPUT SELECT.
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).

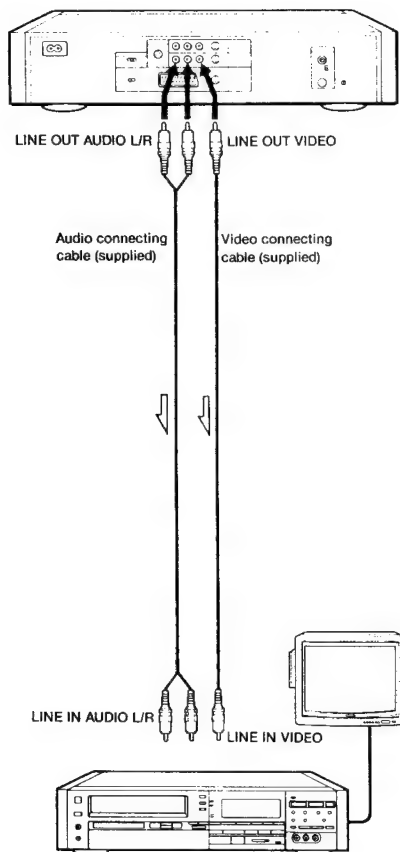
## Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Playback with the player and record with the recorder.

## Note

Avoid making both the VIDEO and S VIDEO connection at the same time.

## Basic Editing



### (2) Editing a Tape to Another VTR

#### Connection

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO input connector, make the connection.
- If the other VTR is a monaural type, make connections with the optional RK-C71 audio connecting cable.

#### Preparation

##### On this VTR = player

- Set AUDIO MONITOR to the appropriate position referring to "Selecting the Monitor Sound" page 36.
- Activate the EDIT mode.

##### On the other VTR = recorder

- Select the line input that the player is connected to.
- Activate the EDIT mode if it is equipped.

#### Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Playback with the player and record with the recorder.

## Synchronized Editing

### (1) Editing a Tape from a 8 mm Camera Recorder

#### Connection

- Make connections referring to the illustration.
- If the camera recorder is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

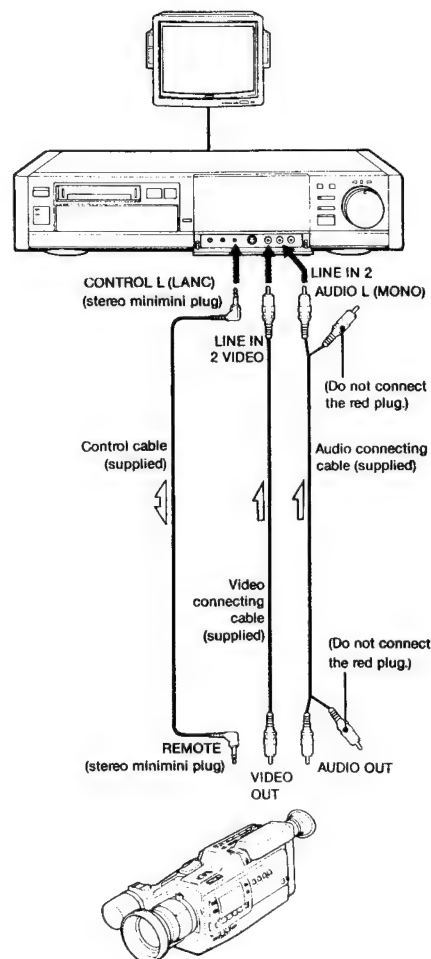
#### Preparation

##### On the other VTR = player

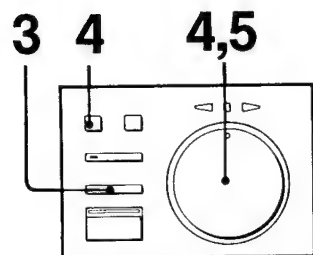
- Activate the EDIT mode if it is available
- Select LANC MODE S or the equivalent if selection is available.

##### On this VTR = recorder

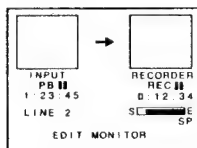
- Select LANC MODE M in the MODE SET menu (page 30).
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).





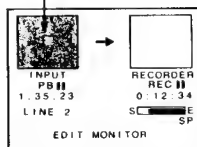


3



4,5

Decide the edit point.



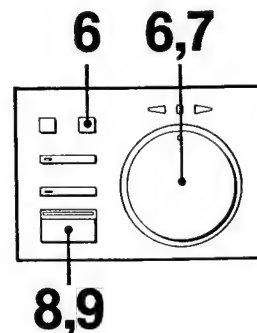
# Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT STANDBY on the recorder.  
The EDIT MONITOR screen will be displayed.  
LINE IN 2 will automatically be selected for the player.  
The PLAYER control button will be turned on.  
The recorder enters the recording pause mode.  
The player enters the playback pause mode.
- 4 Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player.  
The available playback speeds are: REVIEW, PB II (when EDIT SHUTTLE is released), x 1/5 (slow forward), PB (normal speed forward), and CUE.

## Note

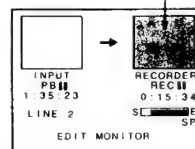
x 1/5 speed playback on the other VTR is controllable if x 1/5 speed playback is available on the other VTR.

- 5 Release the EDIT SHUTTLE when the desired point is found.  
The player enters the playback pause mode.

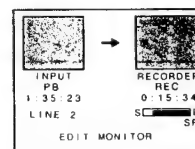


6

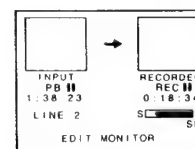
Decide the edit point.



8



9

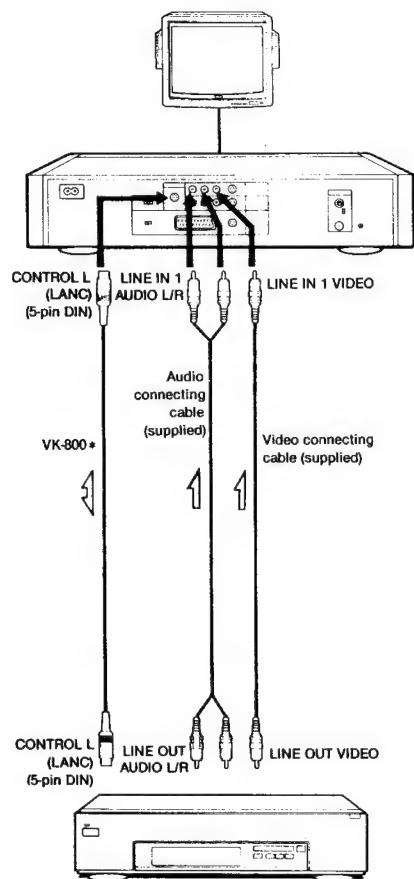


- 6 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate the start point of the recorder.  
The available playback speeds are: REVIEW, x 1 (normal speed reverse), REC II (when the EDIT SHUTTLE is released), x 1/5 (slow forward), x 1 (normal speed forward), and CUE.
- 7 Release the EDIT SHUTTLE when the desired point is found.  
The recorder enters the recording pause mode.
- 8 Press SYNCRO EDIT.  
The player will start playback and the recorder starts recording.
- 9 Press SYNCRO EDIT at the edit end point.  
The player will enter the playback pause mode and the recorder enters the recording pause mode.

To edit more scenes  
Repeat steps 4 to 9.

## When editing is completed

Press EDIT STANDBY. Both units will stop and the EDIT MONITOR display will return to the TV programme screen.



## (2) Editing a Tape from a 8 mm or VHS VTR

### Connection

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO output connector, make the connection.
- If the player is a monaural type, make connections with the optional RK-C71 audio connecting cable.

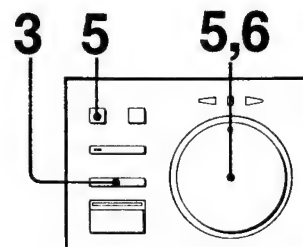
### Preparation

#### On the other VTR = player

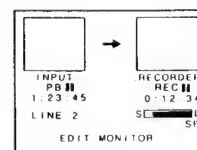
- Activate the EDIT mode if it is available.
- Select LANC MODE S or the equivalent if selection is available.

#### On this VTR = recorder

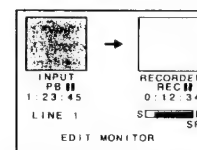
- Select LANC MODE M in the MODE SET menu (page 30).
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).



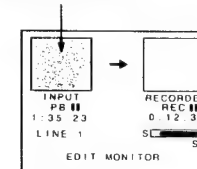
3



4

5  
6

Decide the edit point.



### Operation

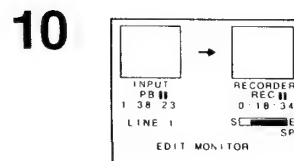
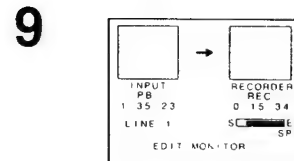
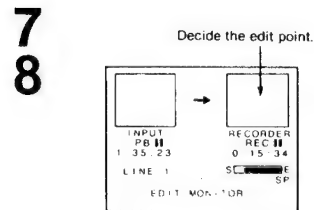
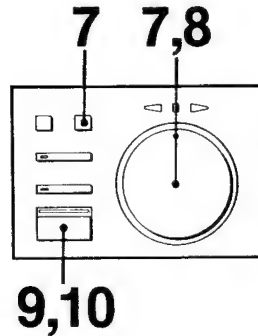
- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT STANDBY on the recorder. The EDIT MONITOR screen will be displayed. The PLAYER control button will be turned on. The recorder enters the recording pause mode. The player enters the playback pause mode.
- 4 Press INPUT SELECT to change the input source display from LINE 2 to LINE 1.
- 5 Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player. The available playback speeds are: REVIEW, PB (when EDIT SHUTTLE is released), x 1/5 (slow forward), PB (normal speed forward), and CUE.

### Note

x 1/5 speed playback on the other VTR is controllable if x 1/5 speed playback is available on the other VTR.

- 6 Release the EDIT SHUTTLE when the desired point is found. The player enters the playback pause mode.

## Insert Editing



**7** Press **RECORDER** control button to turn it on and turn the **EDIT SHUTTLE** to locate the start point of the recorder.

The available playback speeds are: **REVIEW**,  $\times 1$  (normal speed reverse), **REC II** (when the **EDIT SHUTTLE** is released),  $\times 1/5$  (slow forward),  $\times 1$  (normal speed forward), and **CUE**.

**8** Release the **EDIT SHUTTLE** when the desired point is found.  
The recorder enters the recording pause mode.

**9** Press **SYNCHRO EDIT**.  
The player will start playback and the recorder starts recording.

**10** Press **SYNCHRO EDIT** at the edit end point.  
The player will enter the playback pause mode and the recorder enters the recording pause mode.

**To edit more scenes**  
Repeat steps 4 to 10.

**When editing is completed**

Press **EDIT STANDBY**.  
Both units will stop and the **EDIT MONITOR** display will return to the TV programme screen.

**To connect the player to LINE IN 2**  
Use the optional VK-810 connecting cable (5-pin DIN to stereo minimini jack) for the **CONTROL L** LANC connection. The operation will be the same as that in "(1) Editing a Tape from a 8 mm Camera Recorder."

### (1) Inserting Scenes from a 8 mm Camera Recorder

#### Connection

- Make connections referring to the illustration.
- If the camera recorder is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the **LINE IN 2 AUDIO L (MONO)** jack of this VTR.

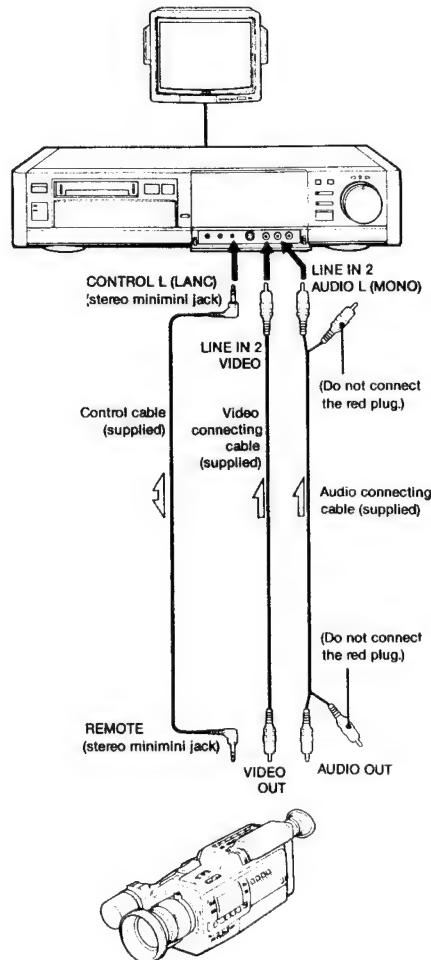
#### Preparation

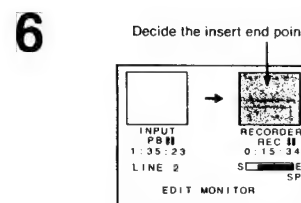
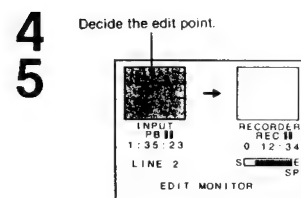
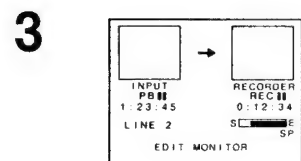
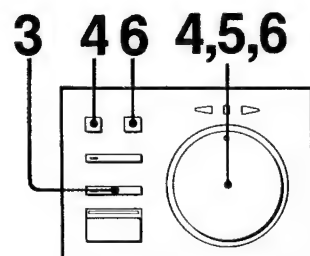
##### On the other VTR = player

- Activate the **EDIT** mode if it is available.
- Select **LANC MODE S** or the equivalent if selection is available.

##### On this VTR = recorder

- Select **LANC MODE M** in the "MODE SET menu" (page 30).
- Select the recording mode **SP** or **LP** with **REC MODE**.
- Adjust the recording level with **REC LEVEL** (page 52).
- Check the other VTR and select **SHUTTLE MODE A** or **B** in the **MODE SET** menu (page 30).



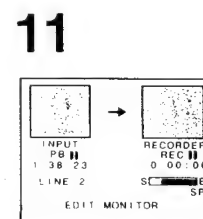
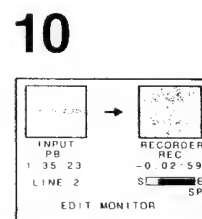
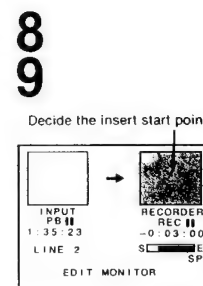
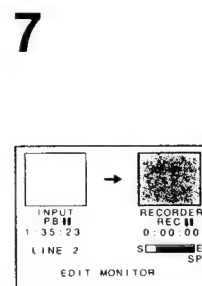
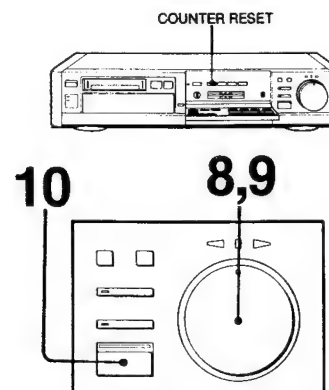


# Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT STANDBY on the recorder. The EDIT MONITOR screen will be displayed. LINE 2 will automatically be selected for the player. The PLAYER control button will be turned on. The recorder enters the recording pause mode. The player enters the playback pause mode.
- 4 Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player. The available playback speeds are: REVIEW, PB II (when EDIT SHUTTLE is released), x 1/5 (slow forward), PB (normal speed forward), and CUE.

**Note**  
x 1/5 speed playback on the other VTR is controllable if x 1/5 speed playback is available on the other VTR.

- 5 Release the EDIT SHUTTLE when the desired point is found. The player enters the playback pause mode.
- 6 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate where insertion should end. The available playback speeds are: REVIEW, - x 1 (normal speed reverse), REC II (when the EDIT SHUTTLE is released), x 1/5 (slow forward), x 1 (normal speed forward), and CUE.



- 7 Press COUNTER RESET. The tape counter for the recorder will be 0H00M00S.
- 8 Turn the EDIT SHUTTLE to rewind the tape to locate where the insertion should start on the recorder.
- 9 Release the EDIT SHUTTLE when the desired point is found. The recorder enters the recording pause mode.
- 10 Press SYNCRO EDIT. The player will start playback and the recorder starts recording.
- 11 Recording will stop when the counter reaches zero. The player will enter the playback pause mode and the recorder enters the recording pause mode.

To edit more scenes  
Repeat steps 4 to 11.

When editing is completed  
Press EDIT STANDBY.  
Both units will stop and the EDIT MONITOR display will return to the TV programme screen.

**Note during synchronized editing**  
COUNTER RESET will not function.

### (1) Editing a Tape from Another VTR

#### Connection

- Make connections referring to the illustration in "Basic Editing (1) Editing a Tape from Another VTR" (page 79).

#### Preparation

##### On the other VTR = player

- Activate the EDIT mode if it is available.

##### On this VTR = recorder

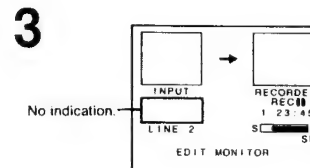
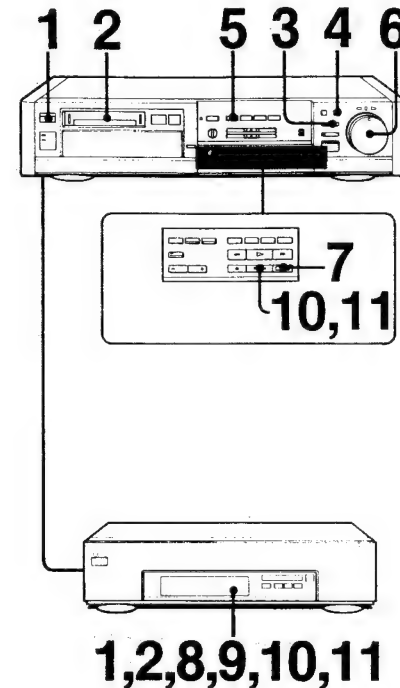
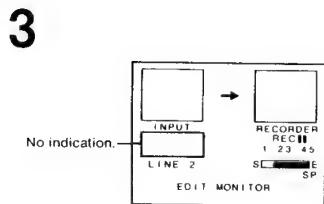
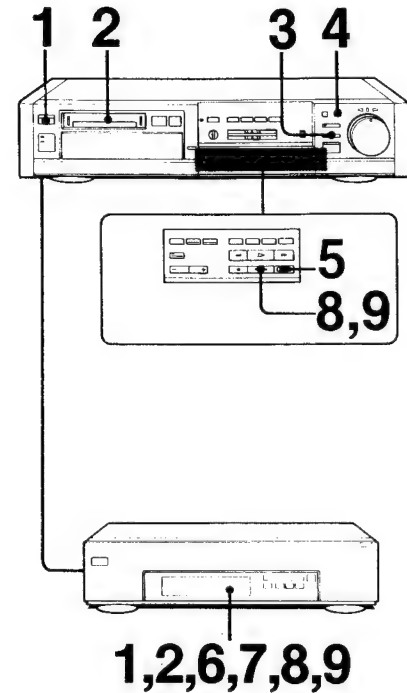
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Select the line input that the player is connected to with INPUT SELECT.

#### Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT MONITOR on the recorder. The EDIT MONITOR screen will be displayed.
- 4 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate the recording start point of the recorder. Releasing the EDIT SHUTTLE makes the recorder enter the playback pause mode.
- 5 Press ● REC to make the recorder enter the recording pause mode.
- 6 Playback the player using the controls on the player and locate the playback start point.
- 7 Set the player in the playback pause mode.
- 8 Release the pause mode on both VTRs simultaneously. The player starts playback and the recorder starts recording.
- 9 To stop recording, press II PAUSE on the recorder and then the player.

To edit more scenes  
Repeat steps 4 to 9.

When editing is completed  
Stop both VTRs.



### (1) Editing a Tape from Another VTR

#### Connection

- Make connections referring to the illustrations in "Basic Editing (1) Editing a Tape from Another VTR" (page 79).

#### Preparation

##### On the other VTR = player

- Activate the EDIT mode if it is available.

##### On this VTR = recorder

- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Select the line input that the player is connected to with INPUT SELECT.

#### Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT MONITOR on the recorder. The EDIT MONITOR screen will be displayed.
- 4 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate where the insertion should end.
- 5 Press COUNTER RESET. The tape counter for the recorder will be 0H00M00S.
- 6 Turn the EDIT SHUTTLE to rewind the tape to locate where the insertion should start on the recorder. Releasing the EDIT SHUTTLE makes the recorder enter the playback pause mode.
- 7 Press ● REC to set the recorder in the recording pause mode.
- 8 Playback the player using the controls on the player and locate the playback start point.
- 9 Set the player in the playback pause mode.
- 10 Release the pause mode on both VTRs simultaneously. The player starts playback and the recorder starts recording.
- 11 Set the recorder in the recording pause mode when the counter reaches zero. Set the player in the playback pause mode.

To edit more scenes  
Repeat steps 4 to 11.

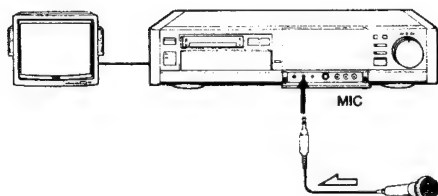
When editing is completed  
Stop both VTRs.

## Audio Dubbing

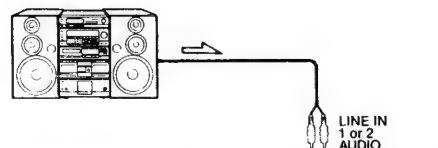
You can additionally record music or narration on a pre-recorded tape while watching the playback picture of the tape. Audio dubbed sound will be recorded on the PCM track.

### Connection

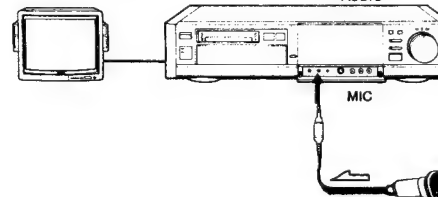
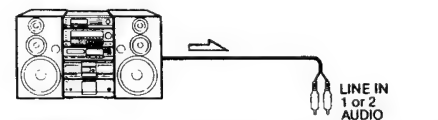
To dub the sound from the microphone



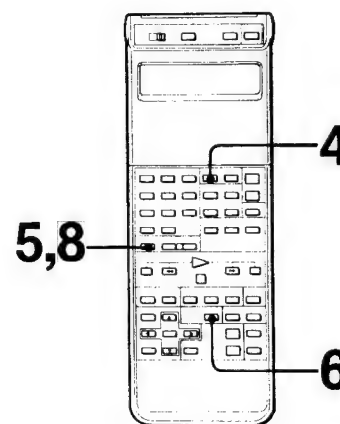
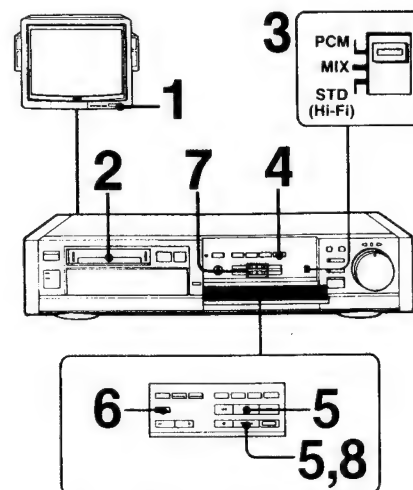
To dub to sound from the audio system



To dub the sound from both the microphone and the audio system



**Note**  
A plug-in power microphone cannot be used with this VTR.



### Operation

- 1 Turn on the TV and select the input for the VTR or select the programme position for the VTR.
- 2 Insert a cassette.  
The power will automatically be tuned on.
- 3 Set the AUDIO MONITOR switch to PCM or MIX.
- 4 When dubbing the sound from the audio system, select the line input that the audio system is connected to by pressing INPUT SELECT.
- 5 Playback the tape to locate the point where the audio dubbing should start and press PAUSE/STILL  $\text{II}$  /  $\text{III}$  or  $\text{II}$  PAUSE.
- 6 Press AUDIO DUB.  
The AUDIO DUB indicator on the VTR will turn on.
- 7 Playback the audio sources and adjust the REC LEVEL.
- 8 Press PAUSE/STILL  $\text{II}$  /  $\text{III}$  or  $\text{II}$  PAUSE again to release the playback pause mode.  
Audio dubbing will start.

**To stop audio dubbing momentarily**  
Press PAUSE/STILL  $\text{II}$  /  $\text{III}$  or  $\text{II}$  PAUSE.

**To stop audio dubbing**  
Press  $\blacksquare$  STOP

**To dub the sound from a TV programme**  
Press INPUT SELECT to display TUNER indicator and select the desired programme position. Then proceed with steps 2 to 5.

### Notes

- During dubbing, a black band or picture noise appears in the center and lower portions of the screen, but the recorded picture will not be affected.
- The audio dubbed sound cannot be played back on a VTR or a video camera recorder without the PCM recording/playback function.

## SECTION 3 DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

### 3-1. REMOVAL OF FRONT PANEL, CASE UPPER, PLATE BOTTOM

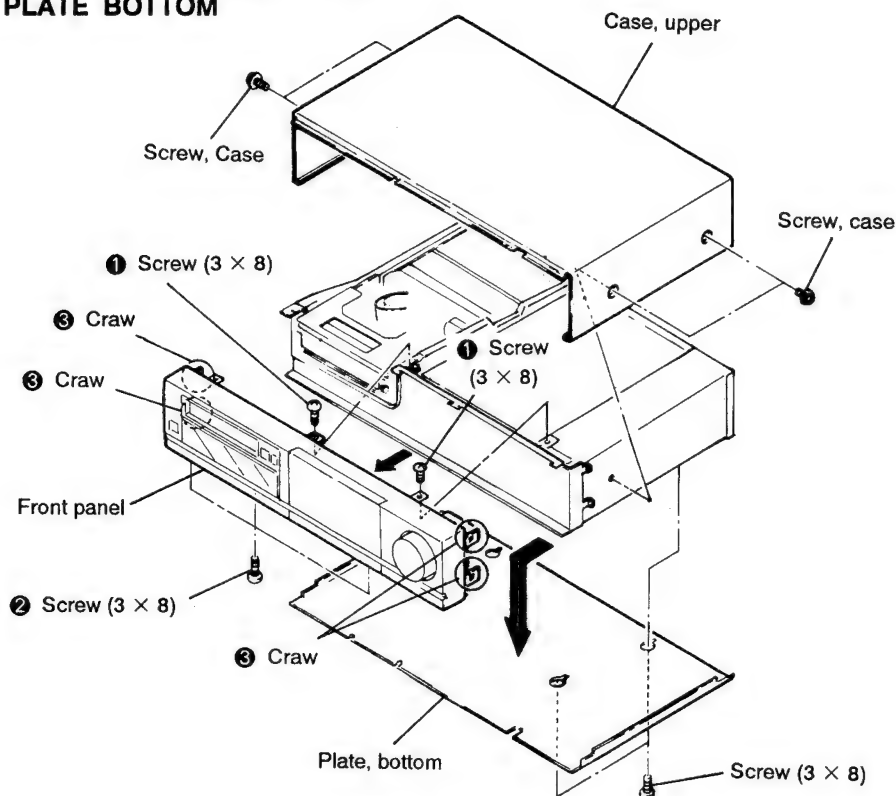


Fig. 3-1.

### 3-2. REMOVAL OF VI-65, PC-39, YC-64, FR-41, FJ-2 BOARDS

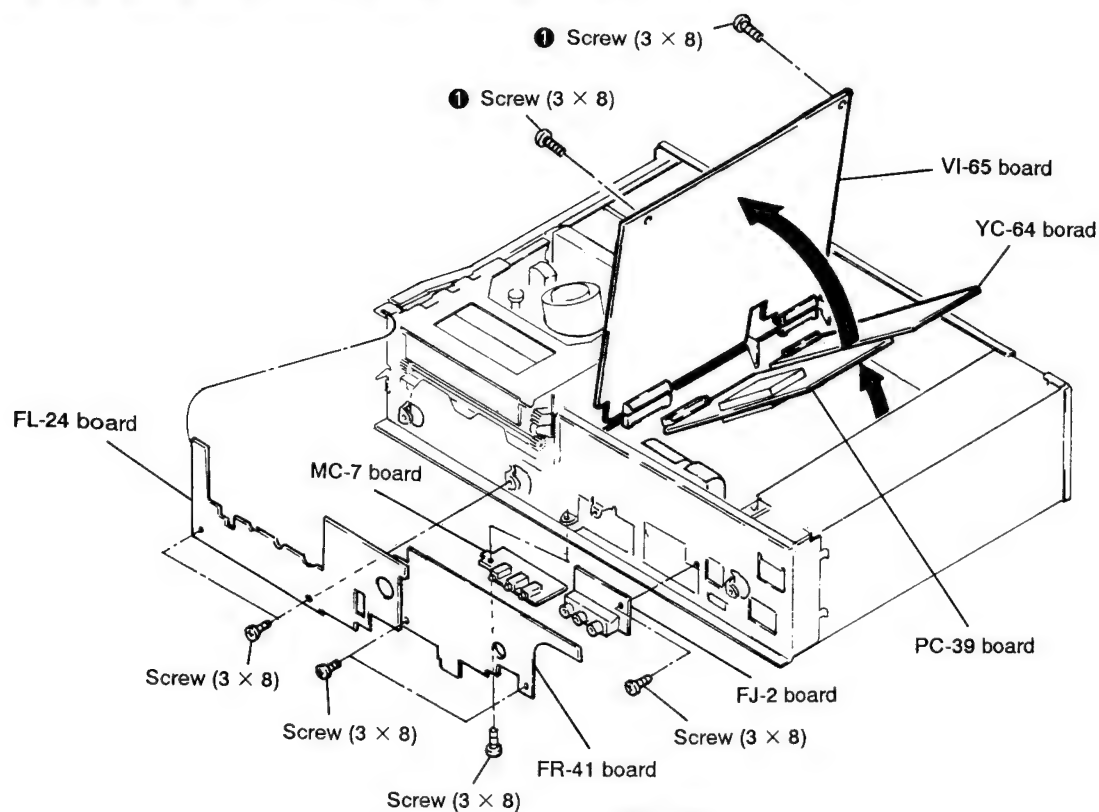


Fig. 3-2.

### 3-3. REMOVING BOARDS CONNECTED BY A BOARD-TO-BOARD CONNECTOR

**Example:** Removing the VI-65 board from the IN-24 board.

- 1) Stand the VI-65 board as shown in Fig. 3-3. **A**.
- 2) As shown in Fig. 3-3. **B**, pull out the VI-65 board at a 20° angle from the IN-24 board.
- 3) Remove the PC-39 board, YC-64 board or other board in the same way.
- 4) To reinstall the board, align the connectors as shown in Fig. 3-3. **C**, then insert the board.

**Note:** Pulling out the board forcefully may damage the connector or pattern. Therefore use care when removing the board.

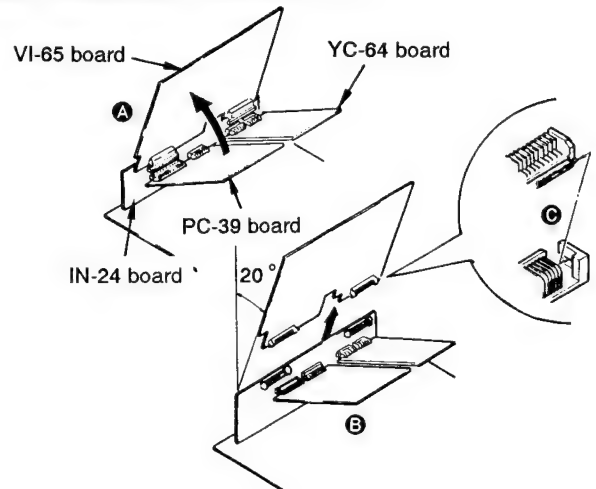


Fig. 3-3.

### 3-4. REMOVAL OF DS-35, TU-100, RP-74, IN-24, CM-15, PS-196 BOARDS

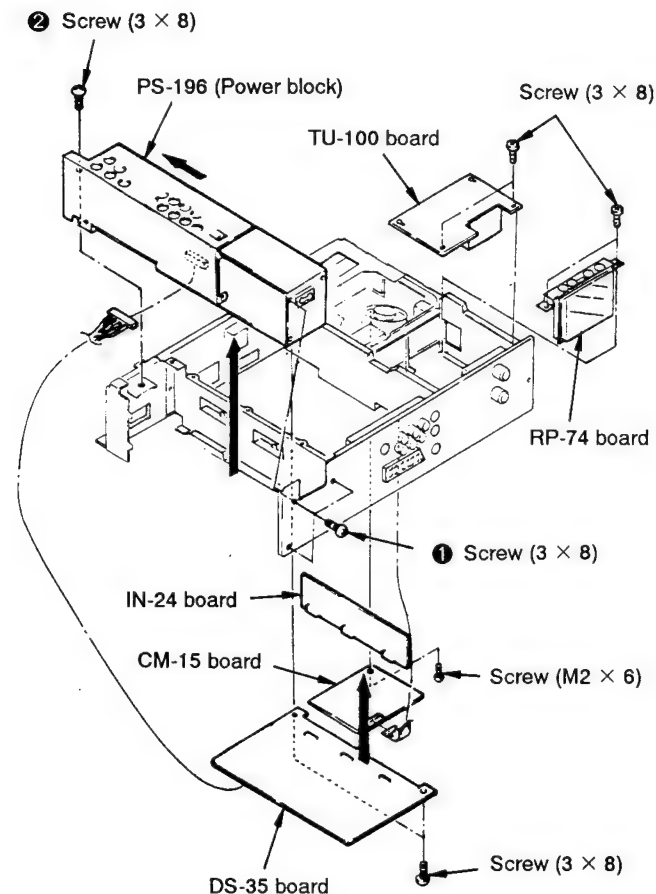


Fig. 3-4.

### 3-5. REMOVAL OF CC-26 BOARD

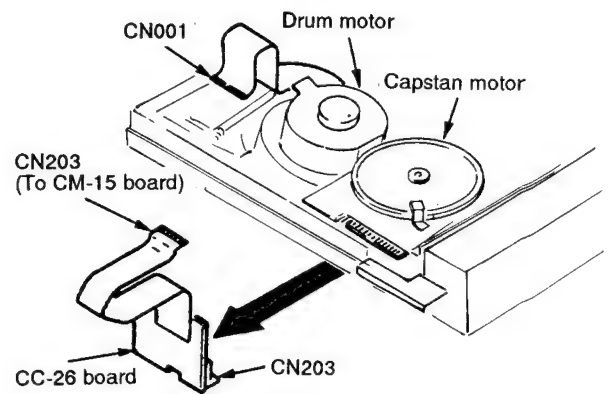


Fig. 3-5.

### 3-6. REMOVAL OF CM-15, UC-4 BOARDS

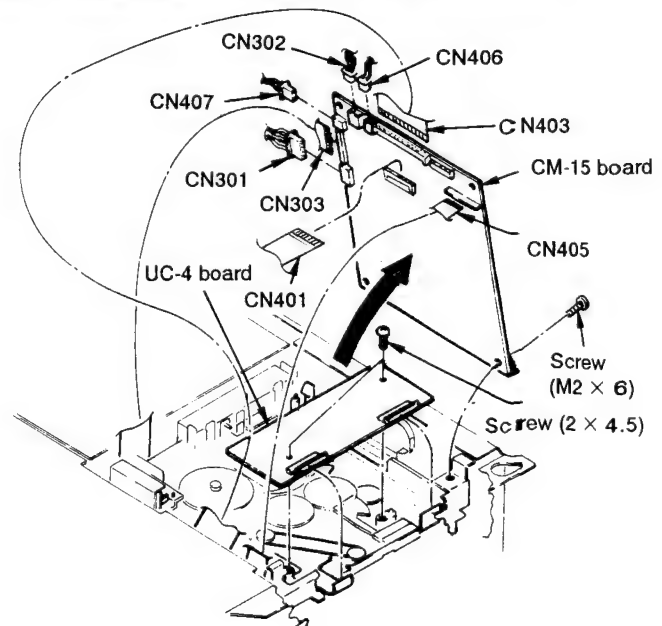


Fig. 3-6.



### 3-7. REMOVAL OF RJ-5, RJ-6 AND REAR FRAME, RF MODULATOR

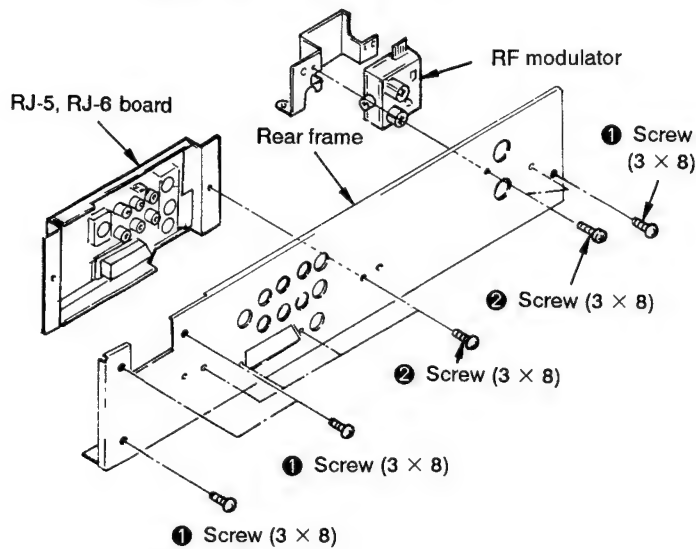


Fig. 3-7.

### 3-8. REMOVAL OF MD, CASSETTE COMPARTMENT BLOCK

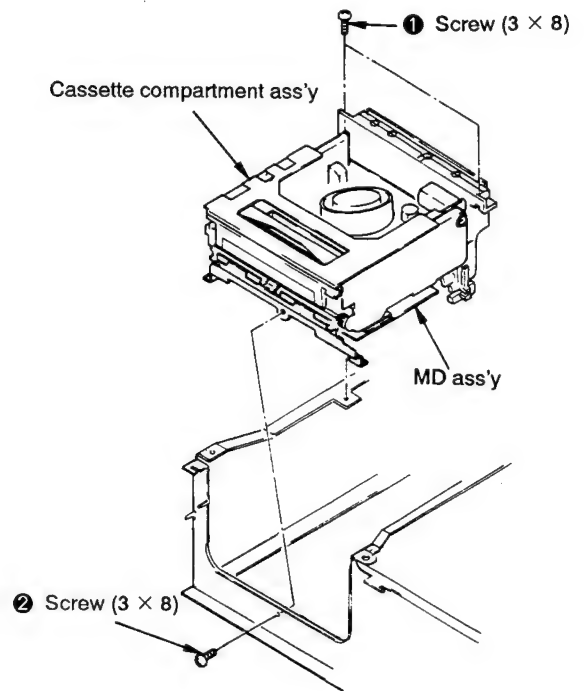


Fig. 3-8.

### 3-9. REMOVAL OF MD SECTION

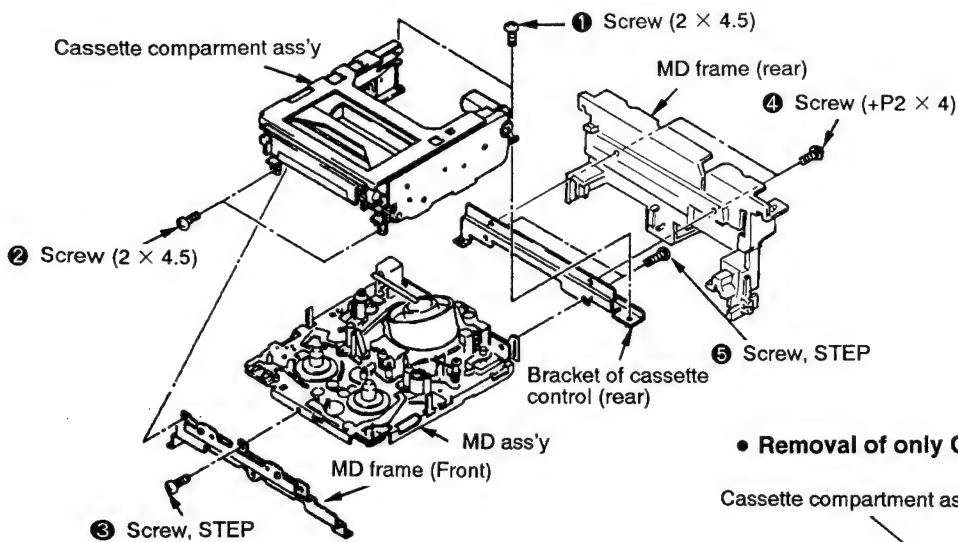
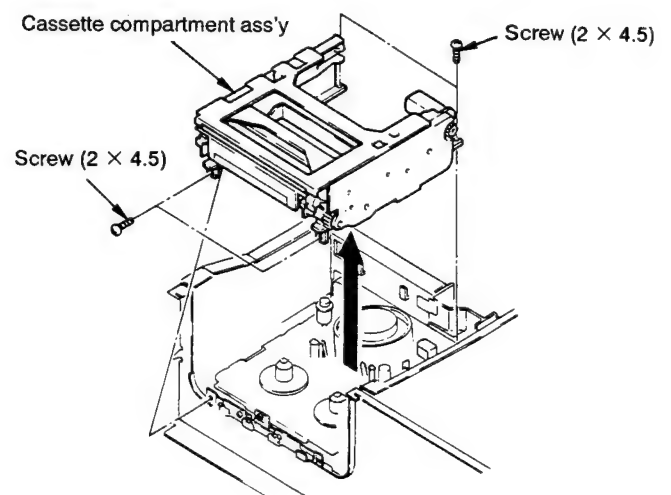


Fig. 3-9.

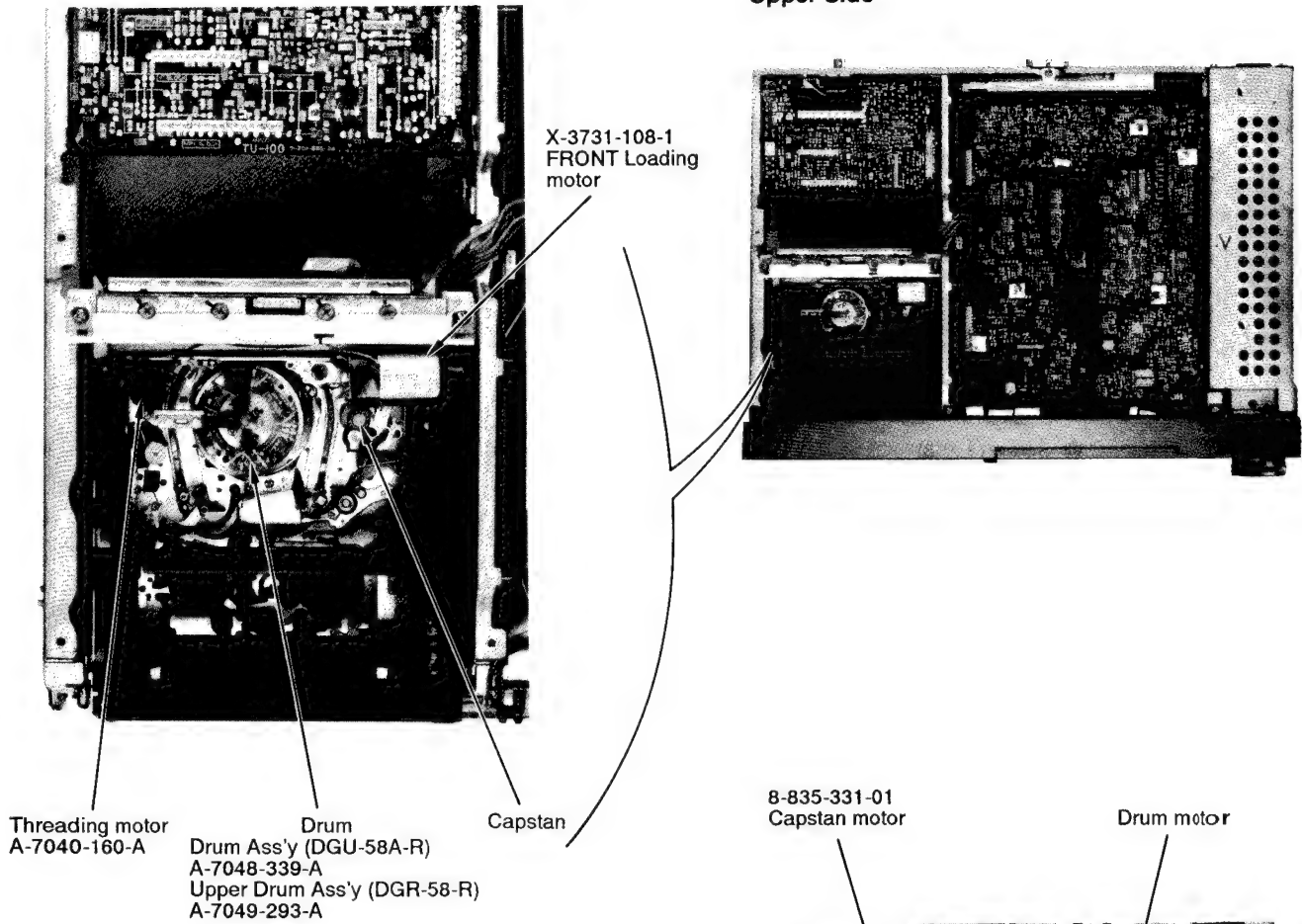
- Notes for cassette compartment ass'y installation.
- For the installation procedure, see page 8.

#### • Removal of only Cassette Compartment Assy

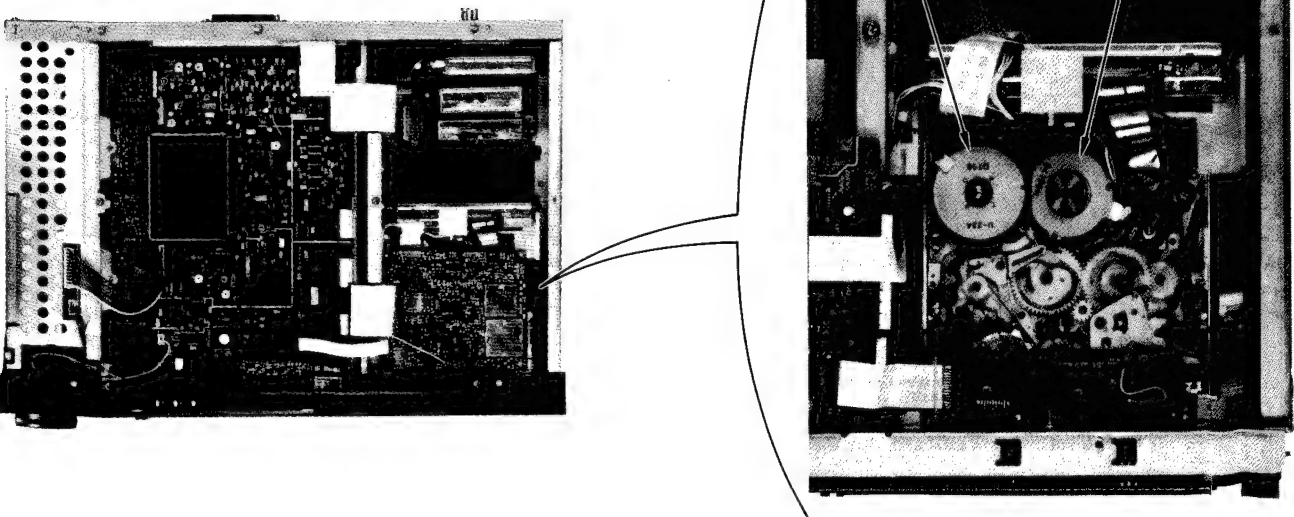


3-10. INTERNAL VIEWS

- Upper Side -

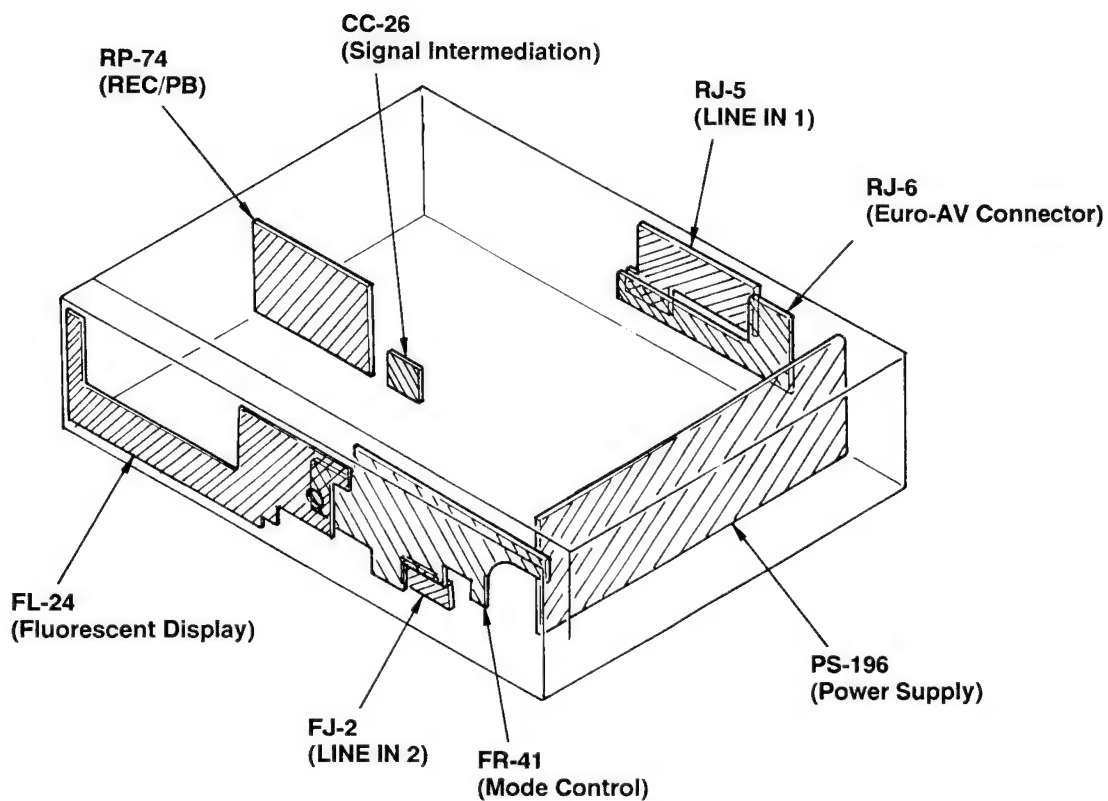
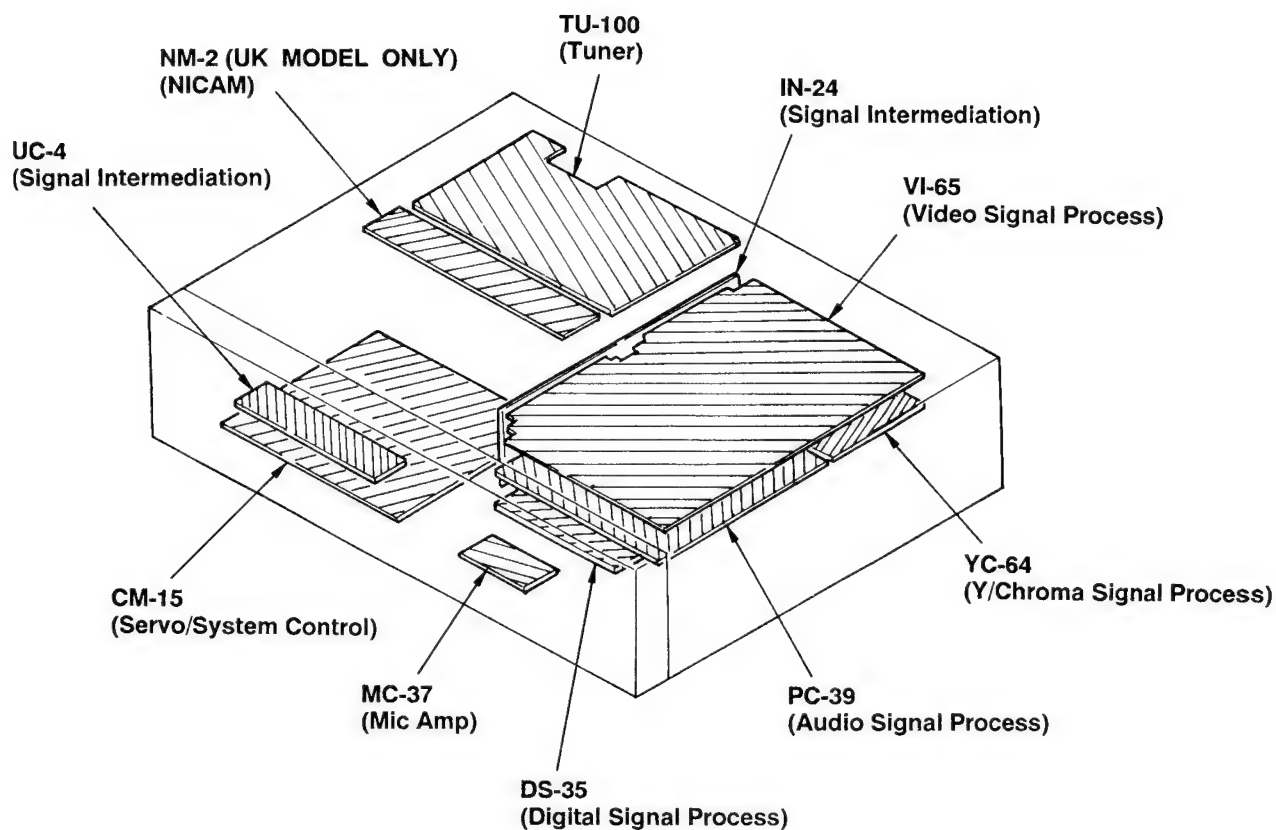


- Bottom Side -



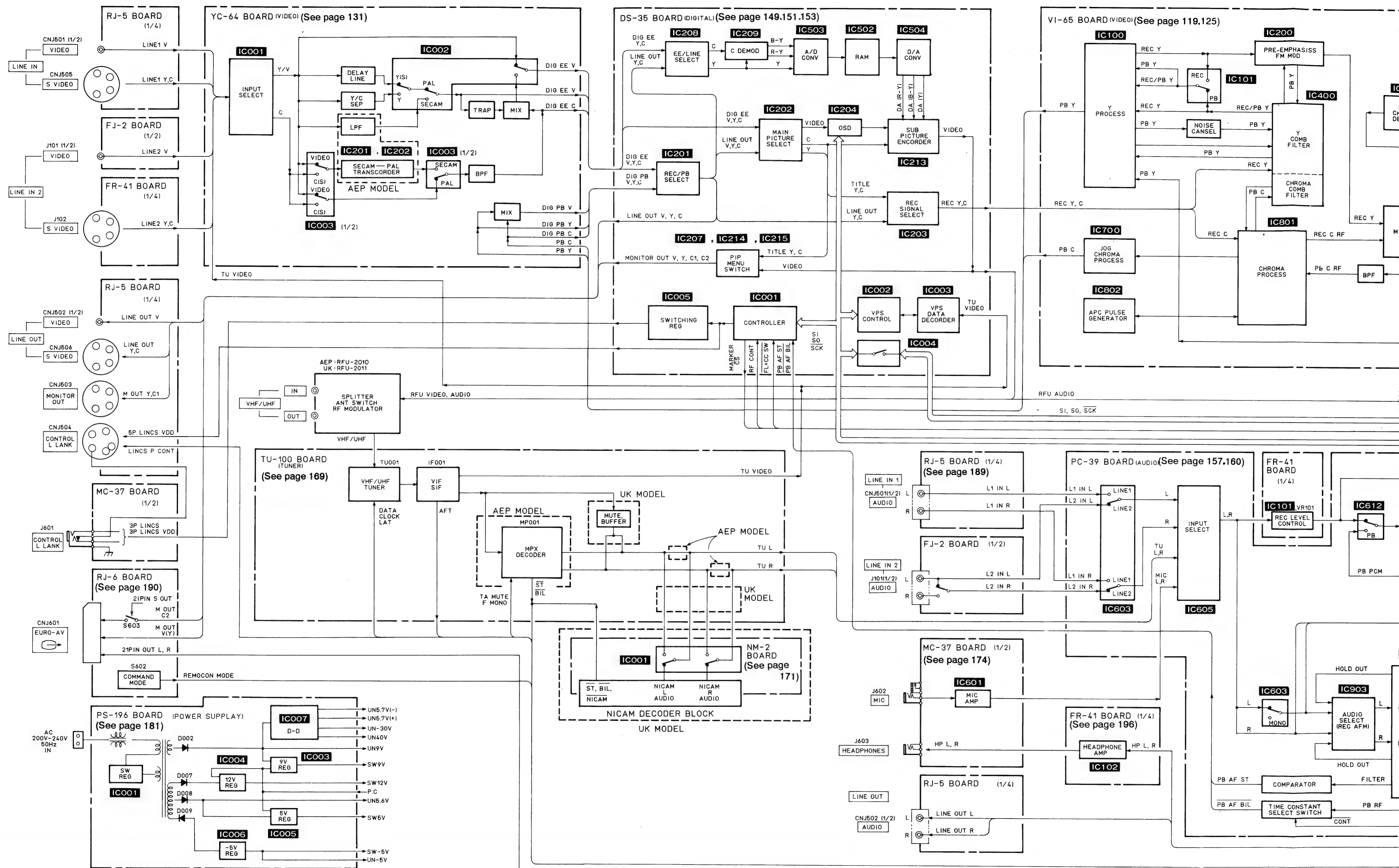
## SECTION 4 DIAGRAMS

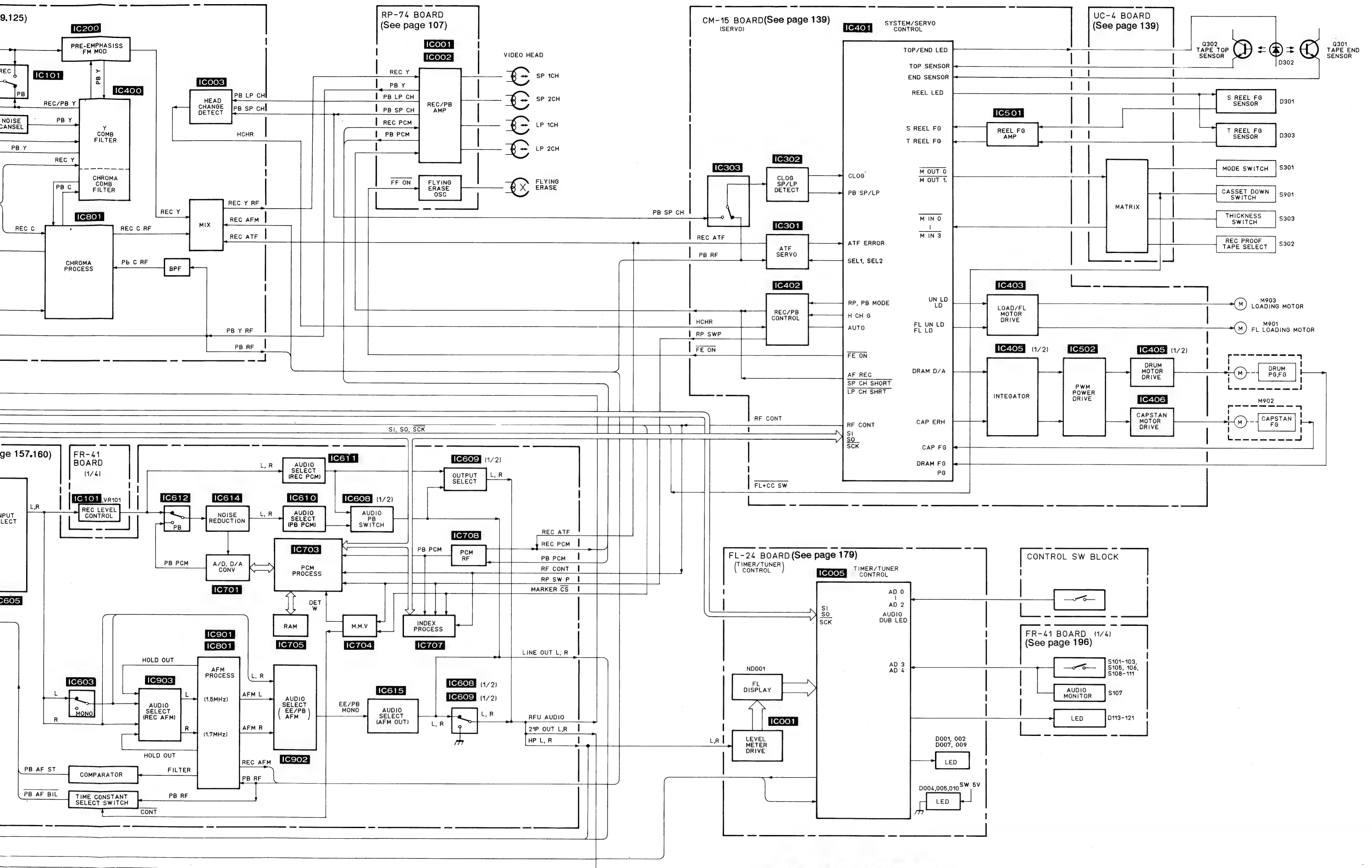
### 4-1. CIRCUIT BOARDS LOCATION



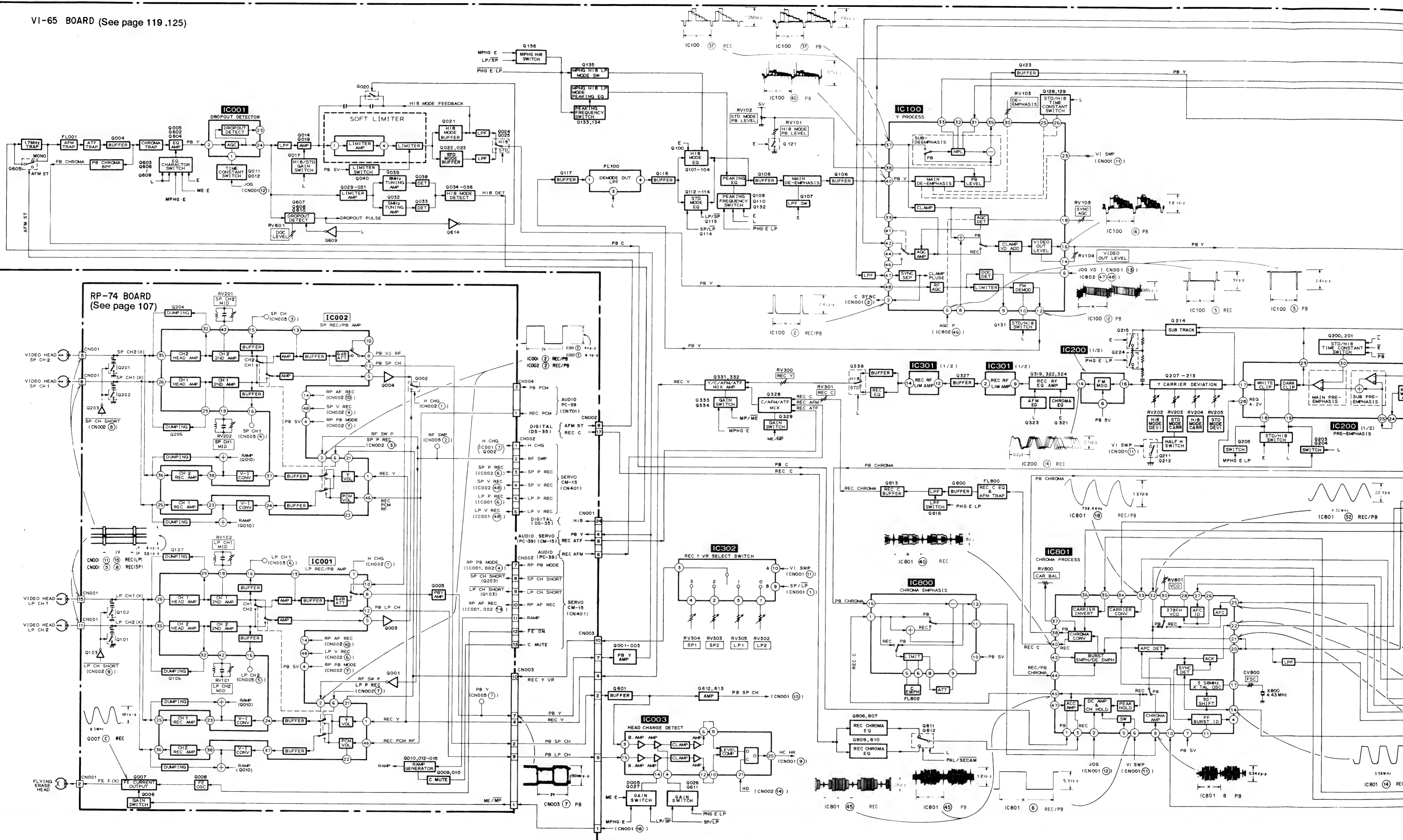


#### 4-2. OVERALL BLOCK DIAGRAM

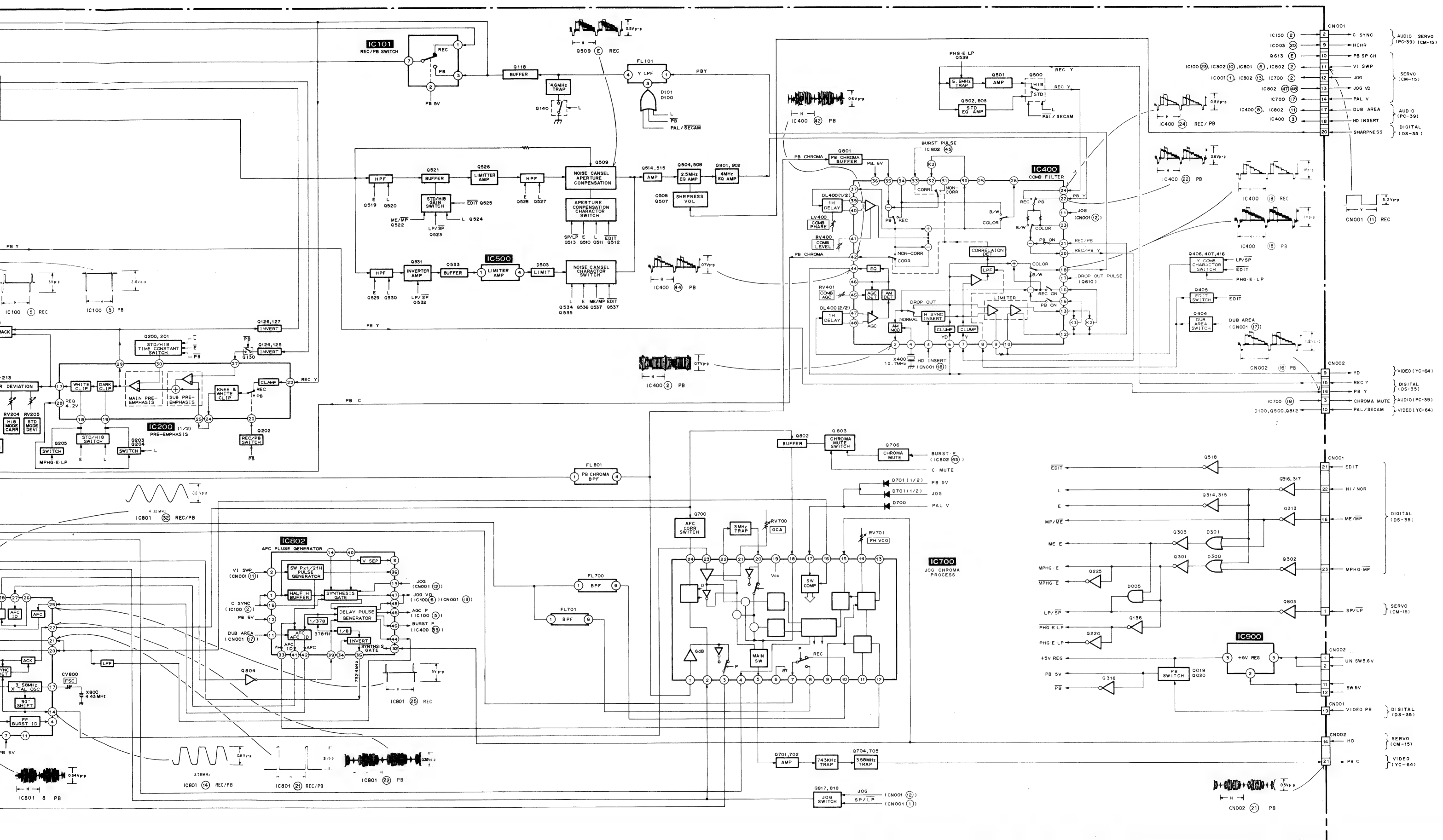




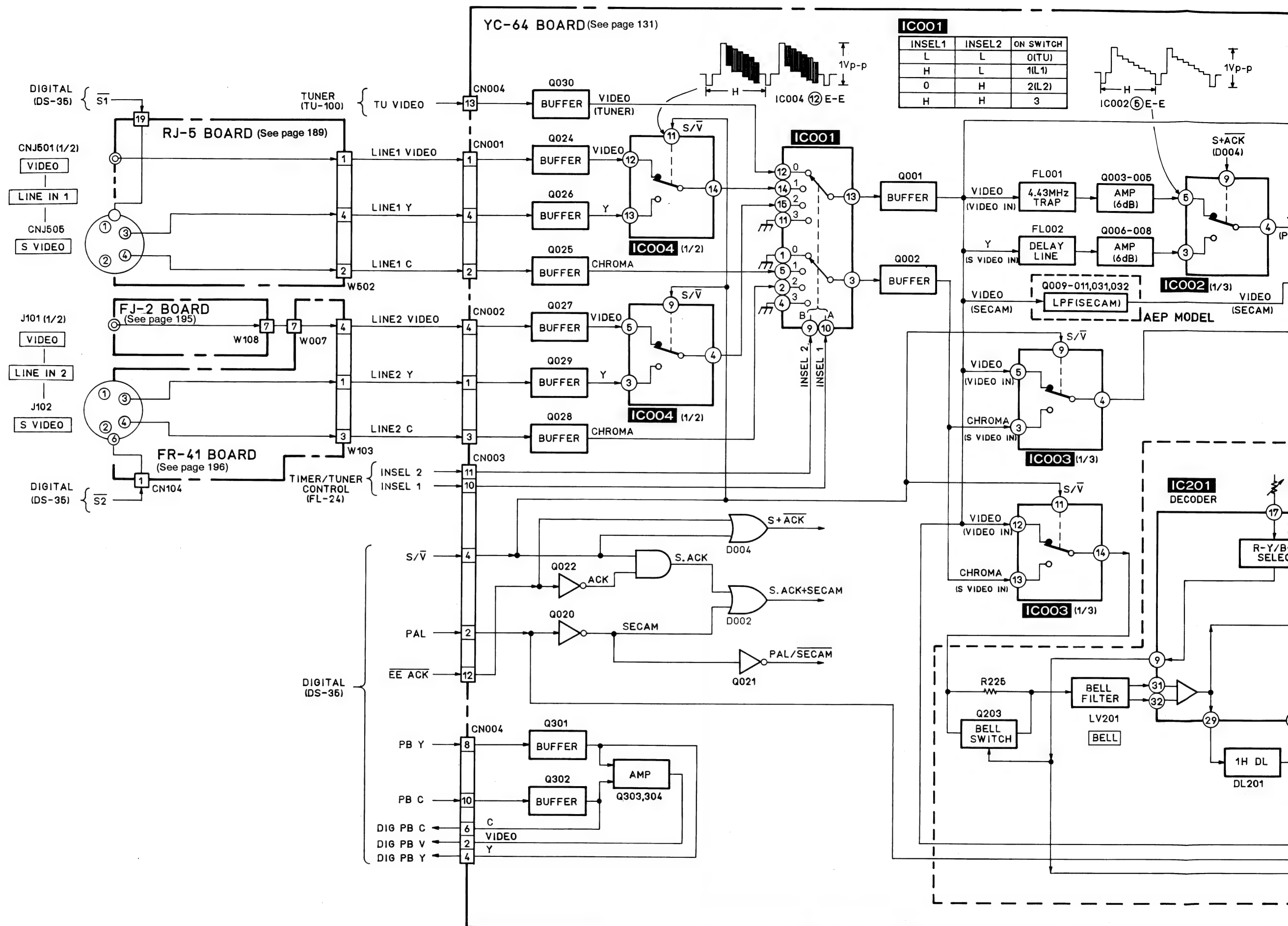
4-3. VIDEO BLOCK DIAGRAM (1)

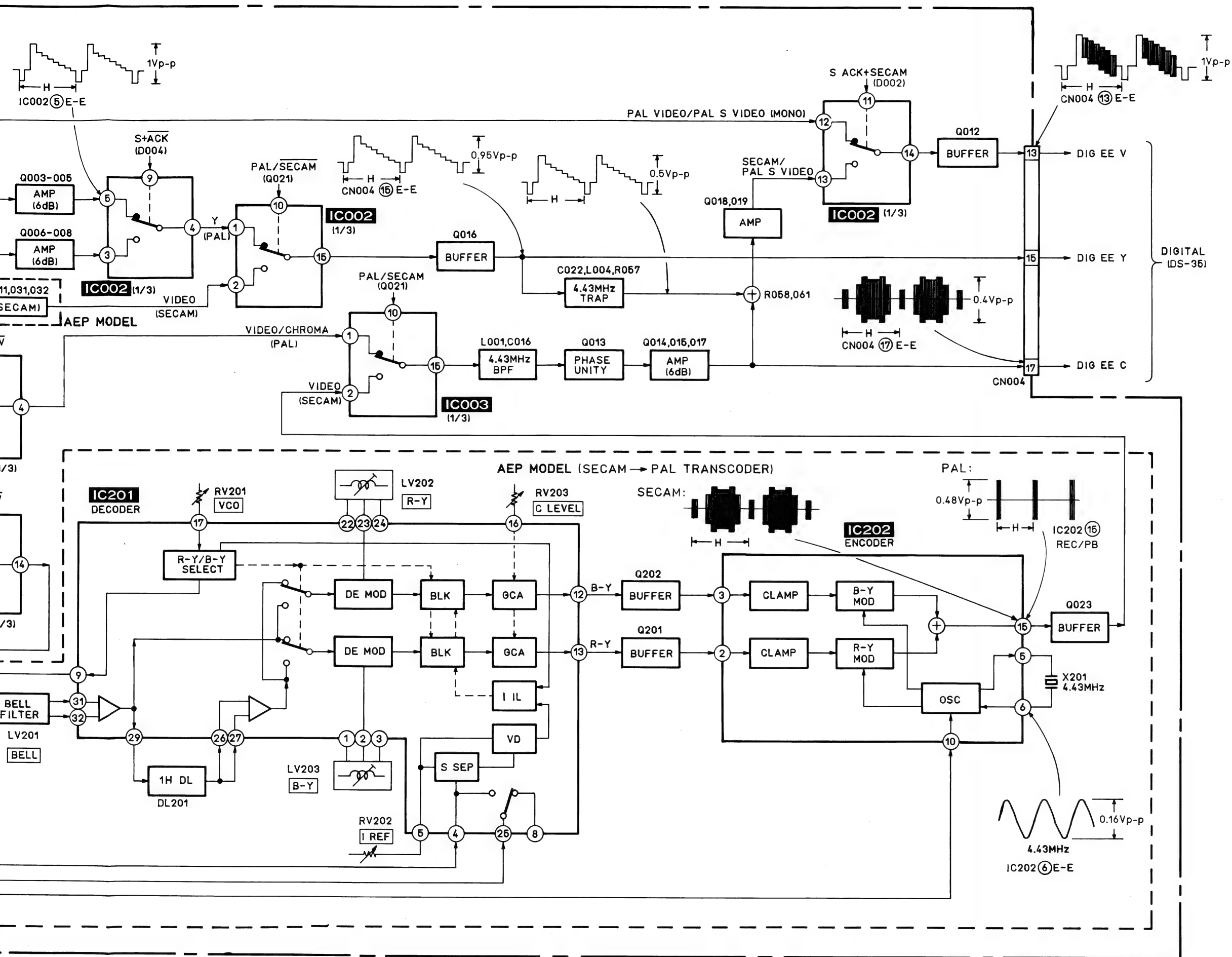




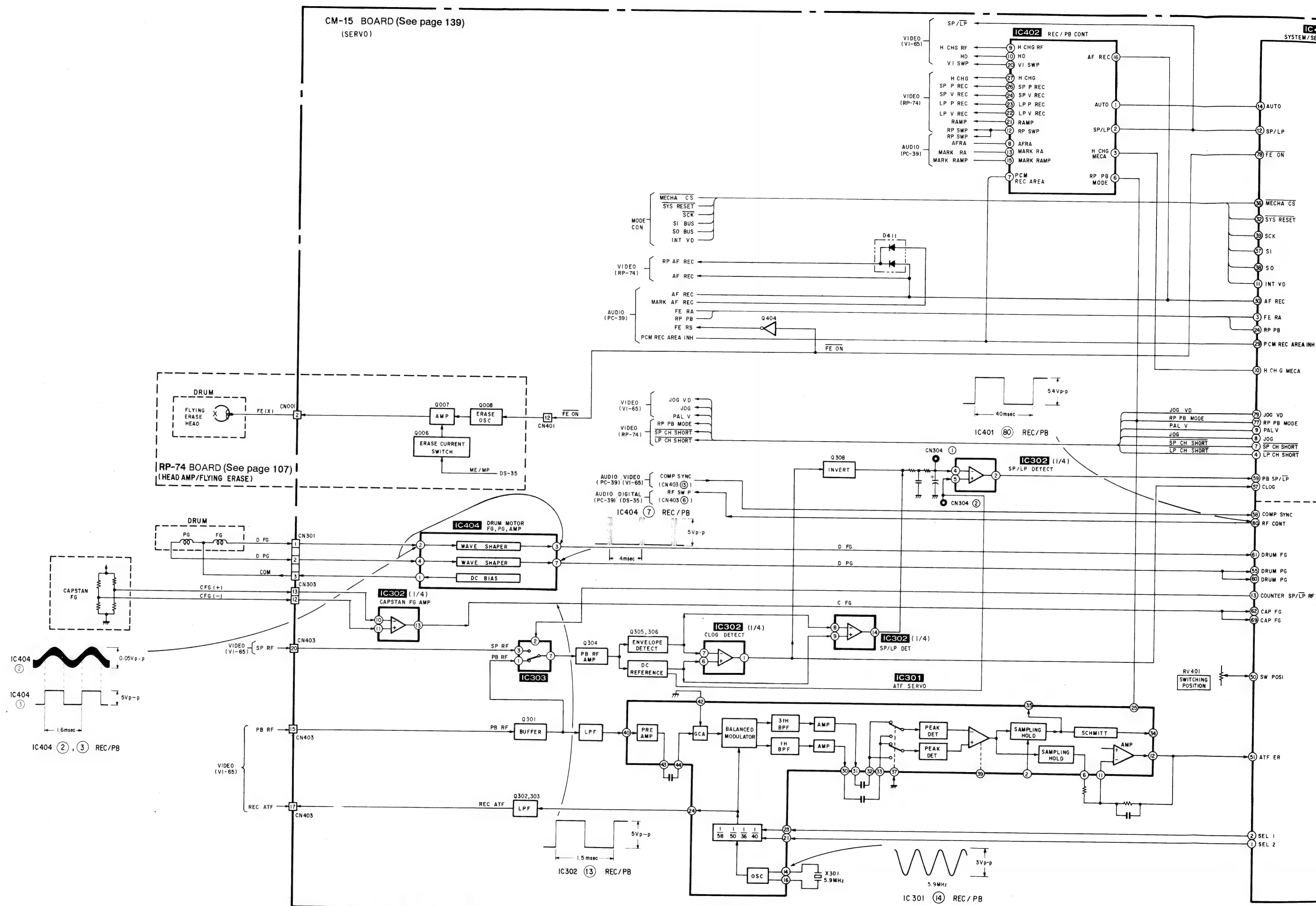


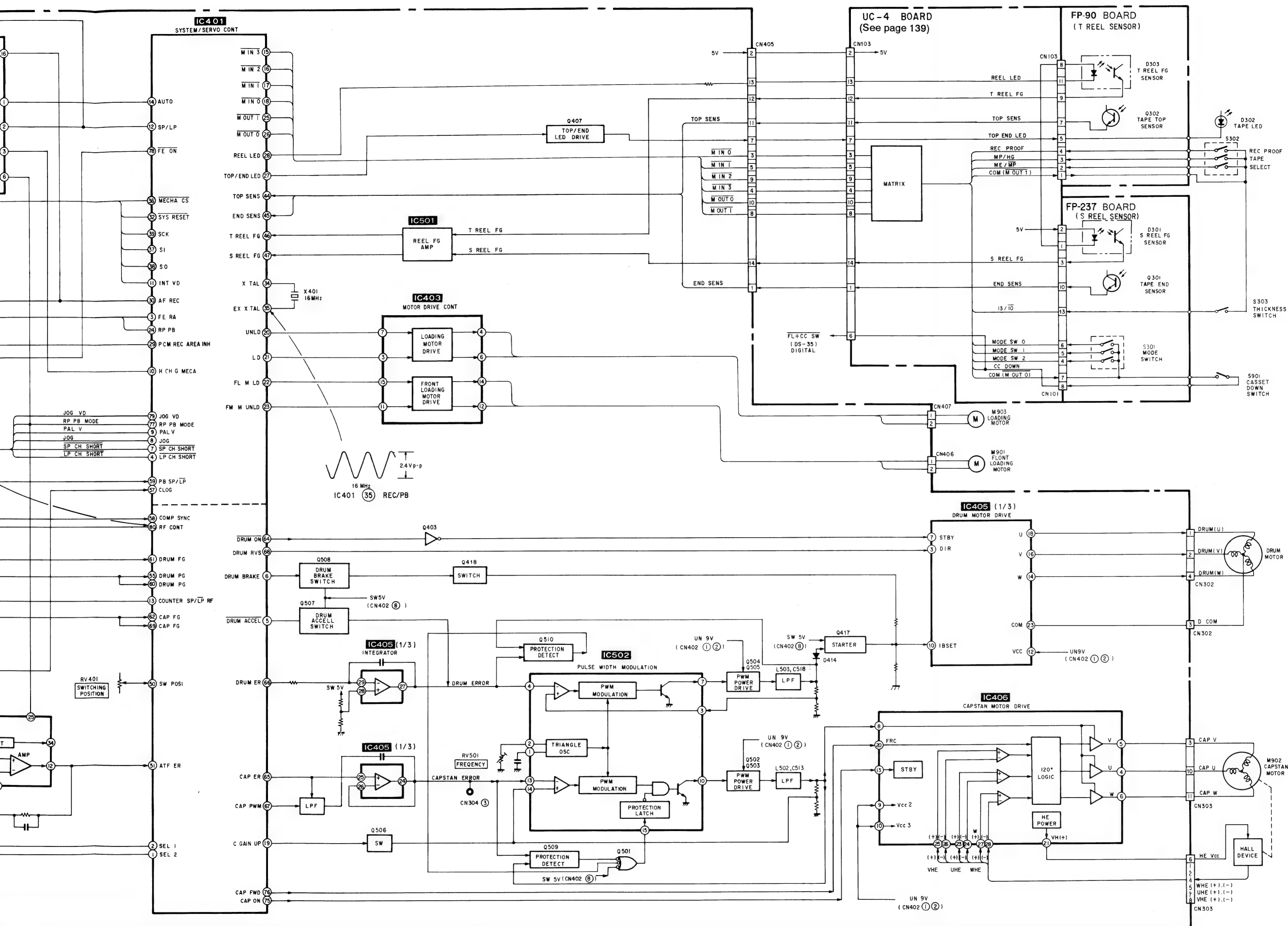






# 4-5. SYSTEM CONTROL, SERVO BLOCK DIAGRAM





#### 4-6. SYSTEM CONTROL – VIDEO, AUDIO BLOCK INTERFACE (CM-15 BOARD IC401)

SIGNAL	I/O	Pin No.	EJECTED	THREAD- ING	UN THREAD- ING	STOP	FF	REW	CUE	REVIEW	PB	PB • PAUSE	REC	REC • PAUSE	X2	SLOW	AF REC	AF REC P.
SEL 2	O	IC401 ① Pin	H	H	H	H	H	H	*3	*3	*2	H	*1	L	*17	*18	*19	H
SEL 1	O	IC401 ② Pin	H	H	H	H	H	H	*3	*3	*2	H	*1	H	*17	*18	*19	H
DRUM ON	O	IC401 ④ Pin	H	L	L	H	L	L	L	L	L	L	L	L	L	L	L	L
INT VD	O	IC401 ⑪ Pin	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
SW POSI	I	IC401 ⑫ Pin	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5
ATF ERROR	I	IC401 ⑮ Pin	*6	*6	*6	*6	*7	*7	*7	*7	*7	*7	*6	*6	*7	*7	*7	*7
DRUM PG	I	IC401 ⑮, ⑯ Pin	L	*8	*8	L	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8
DRUM FG	I	IC401 ⑮ Pin	H	*9	*9	H	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
CAP FG	I	IC401 ⑲, ⑳ Pin	H/L	PULSE	PULSE	H/L	*10	*10	*10	*10	*10	H/L	*10	H/L	*10	H/L	*10	H/L
CAP ERH	O	IC401 ⑳ Pin	*11	*11	*11	L	*11	*11	*11	*11	*11	L	*11	L	*11	*11	*11	L
DRUM ERROR	O	IC401 ㉑ Pin	L	*12	*12	L	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12
CAP PWM	O	IC401 ㉒ Pin	L	*13	*13	L	*13	*13	*13	*13	*13	L	*13	L	*13	*13	*13	L
DRUM RVS	O	IC401 ㉓ Pin	"L"	*14	L	L	L	L	L	L	L	L	L	L	L	L	L	L
CAP ON	O	IC401 ㉔ Pin	L	H	H	L	H	H	H	H	H	L	H	L	H	H/L	H	L
CAP FWD	O	IC401 ㉕ Pin	L	L	H	L	H	L	H	L	H	H	H	L	H	H/L	H	L
RF CONT	O	IC401 ㉖ Pin	*16	*16	*16	"H" or "L"	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16

- \*1. Refer to timing chart 1.
- \*2. Refer to timing chart 2.
- \*3. Refer to timing chart 3.
- \*4. 1V period "H" pulse.
- \*5. DC voltage set with RV102 (Switching position adjustment).
- \*6. Approx. 2.5Vdc.
- \*7. ATF error voltage.
- \*8. 2V period "H" pulse.
- \*9. 1.4msec period pulse.

- \*10. Pulses in proportion to frequency of the tape speed.
- \*11. Pulse output for rising or falling edges of the capstan.
- \*12. 6msec period PWM signal (tri-state) of "H", "L" and "HI-Z" (2.5Vdc).
- \*13. 64  $\mu$ sec period PWM signal.
- \*14. Momentarily "H" when threading of full top tape.
- \*16. 2V period duty 50% pulse.

#### 4-7. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT

SIGNAL	I/O	Pin No.	STOP	FF
SP P REC	O	CN401 ③ Pin	L	L
LP V REC	O	CN401 ④ Pin	L	L
LP P REC	O	CN401 ⑤ Pin	L	L
SP V REC	O	CN401 ⑥ Pin	L	L
SP CH SHORT	O	CN401 ⑧ Pin	*13	L
LP CH SHORT	O	CN401 ⑨ Pin	*13	H
JOG	O	IC401 ⑩ Pin	L	L
SP/LP	O	IC401 ⑫ Pin	H/L	H/L
SYSCON SO (SI)	O	IC401 ⑬ Pin	*9	*9
SYSCON SCK (SCK)	I	IC401 ⑭ Pin	*10	*10
CLOG	I	IC401 ⑮ Pin	H	*5
COMP SYNC	I	IC401 ⑯ Pin	*6	*6
PB SP/LP	I	IC401 ⑰ Pin	L	*7
RP PB MODE	O	IC401 ⑱ Pin	L	L
FF ON	O	IC401 ㉒ Pin	H	H
JOG VD	O	IC401 ㉓ Pin	L	L
RF CONT*1	O	IC401 ㉔ Pin	1.8Vdc	*11

- \*1. According to recorded mode of playback tape. (SP... "H", LP... "L")
- \*2. According to SP/LP selector (S602) setting. (SP... "H", LP... "L")
- \*3. 1V period "H" pulse.
- \*5. Non-signal "H" normal "L"
- \*6. Positive compound synchronizing signal.
- \*7. SP mode recording tape "H"  
LP mode recording tape "L"
- \*9. 1V period "L" pulse train.

- \*10. 1V pulse
- \*11. 2V pulse
- \*12. PCM
- \*13. According to SP/LP selector (S602) setting. (SP... "H", LP... "L")
- \*14. According to SP/LP selector (S602) setting. (SP... "H", LP... "L")
- \*15. According to SP/LP selector (S602) setting. (SP... "H", LP... "L")
- \*16. "H"

REC	REC • PAUSE	X2	SLOW	AF REC	AF REC P.
*1	L	*17	*18	*19	H
*1	H	*17	*18	*19	H
L	L	L	L	L	L
*4	*4	*4	*4	*4	*4
*5	*5	*5	*5	*5	*5
*6	*6	*7	*7	*7	*7
*8	*8	*8	*8	*8	*8
*9	*9	*9	*9	*9	*9
*10	H/L	*10	H/L	*10	H/L
*11	L	*11	*11	*11	L
*12	*12	*12	*12	*12	*12
*13	L	*13	*13	*13	L
L	L	L	L	L	L
H	L	H	H/L	H	L
H	L	H	H/L	H	L
*16	*16	*16	*16	*16	*16

HI-Z" (2.5Vdc).

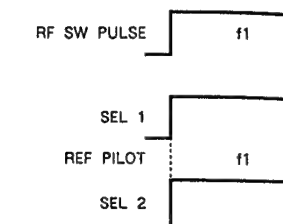
#### 4-7. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (CM-15 BOARD IC401)

SIGNAL	I/O	Pin No.	STOP	FF	REW	CUE	REVIEW	PB	PB • PAUSE	REC	REC • PAUSE	X2	SLOW	AF REC	AF REC PAUSE
SP P REC	O	CN401 ③ Pin	L	L	L	L	L	L	L	*16	L	L	L	*16	L
LP V REC	O	CN401 ④ Pin	L	L	L	L	L	L	L	*2	L	L	L	L	L
LP P REC	O	CN401 ⑤ Pin	L	L	L	L	L	L	L	*16	L	L	L	*16	L
SP V REC	O	CN401 ⑥ Pin	L	L	L	L	L	L	L	*2	L	L	L	L	L
SP CH SHORT	O	CN401 ⑧ Pin	*13	L	H	H	H	*13	*14	*15	*15	*14	*14	*13	*14
LP CH SHORT	O	CN401 ⑨ Pin	*13	H	H	H	H	*13	*14	*15	*15	*14	*14	*13	*14
JOG	O	IC401 ⑧ Pin	L	L	L	H	H	L	H	L	L	H	H	L	H
SP/LP	O	IC401 ⑫ Pin	H/L	H/L	H/L	*1	*1	*1	*1	*2	*2	*1	*1	*1	*1
SYS CON SO (SI)	O	IC401 ③⑧ Pin	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
SYS CON SCK (SCK)	I	IC401 ③⑨ Pin	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10
CLOG	I	IC401 ⑤⑦ Pin	H	*5	*5	*5	*5	*5	H	H	H	H	H	H	H
COMP SYNC	I	IC401 ⑤⑧ Pin	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
PB SP/LP	I	IC401 ⑤⑨ Pin	L	*7	*7	*7	*7	L	L	L	L	L	L	L	L
RP PB MODE	O	IC401 ⑦⑦ Pin	L	L	L	H	H	H	H	L	L	H	H	H	H
FF ON	O	IC401 ⑦⑧ Pin	H	H	H	H	H	H	H	L	H	H	H	*12	H
JOG VD	O	IC401 ⑦⑨ Pin	L	L	L	*3	*3	L	*3	L	L	*3	*3	*3	*3
RF CONT*1	O	IC401 ⑧⑩ Pin	1.8Vdc	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11

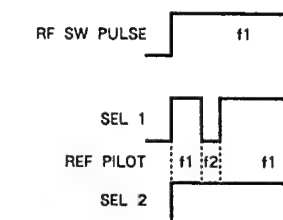
- \*1. According to recorded mode of playback tape. (SP...“H”, LP...“L”)
- \*2. According to SP/LP selector (S602) setting. (SP...“H”, LP...“L”)
- \*3. 1V period “H” pulse.
- \*5. Non-signal “H” normal “L”
- \*6. Positive compound synchronizing signal.
- \*7. SP mode recording tape “H”  
LP mode recording tape “L”
- \*9. 1V period “L” pulse train.

- \*10. 1V period “L” pulse train.
- \*11. 2V period duty 50% pulse.
- \*12. PCM eria “L” when SP after recording, Normally: “H”
- \*13. According to recorded mode of playback tape. (SP...“L”, LP...“H”)
- \*14. According to HCHG.
- \*15. According to SP/LP selector (S602) setting. (SP...“L”, LP...“H”)
- \*16. “H” in PCM area according to REC SP/LP.

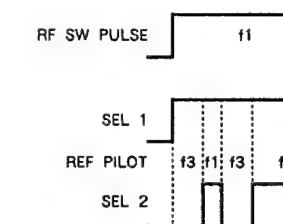
TIMING CHART 1 (REC)



TIMING CHART 2 (PB)



TIMING CHART 3 (CUE)

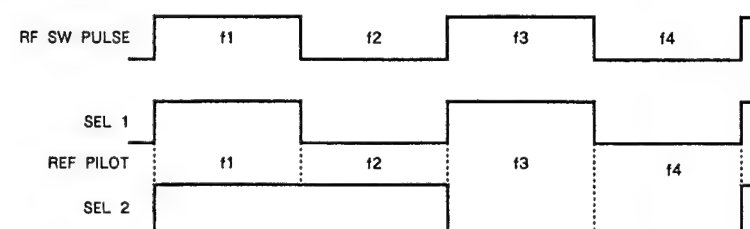


# T INTERFACE (CM-15 BOARD IC401)

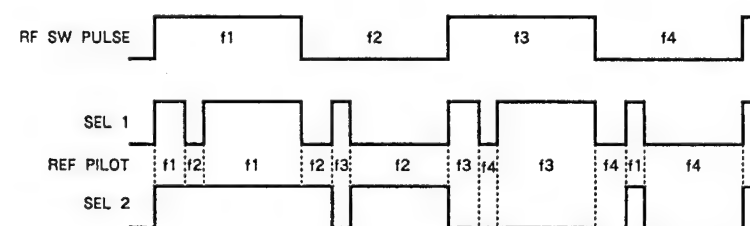
	CUE	REVIEW	PB	PB- PAUSE	REC	REC- PAUSE	X2	SLOW	AF REC	AF REC PAUSE
	L	L	L	L	*16	L	L	L	*16	L
	L	L	L	L	*2	L	L	L	L	L
	L	L	L	L	*16	L	L	L	*16	L
	L	L	L	L	*2	L	L	L	L	L
	H	H	*13	*14	*15	*15	*14	*14	*13	*14
	H	H	*13	*14	*15	*15	*14	*14	*13	*14
	H	H	L	H	L	L	H	H	L	H
	*1	*1	*1	*1	*2	*2	*1	*1	*1	*1
	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10
	*5	*5	*5	H	H	H	H	H	H	H
	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
	*7	*7	L	L	L	L	L	L	L	L
	H	H	H	H	L	L	H	H	H	H
	H	H	H	H	L	H	H	H	*12	H
	*3	*3	L	*3	L	L	*3	*3	*3	*3
	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11

"L" pulse train.  
 duty 50% pulse.  
 "L" when SP after recording, Normally: "H"  
 to recorded mode of playback tape.  
 LP..."H")  
 to HCHG.  
 to SP/LP selector (S602) setting.  
 LP..."H")  
 M area according to REC SP/LP.

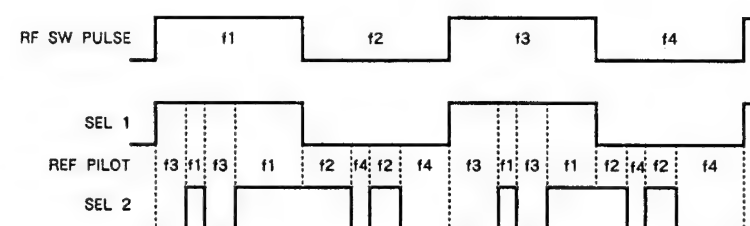
TIMING CHART 1 (REC)



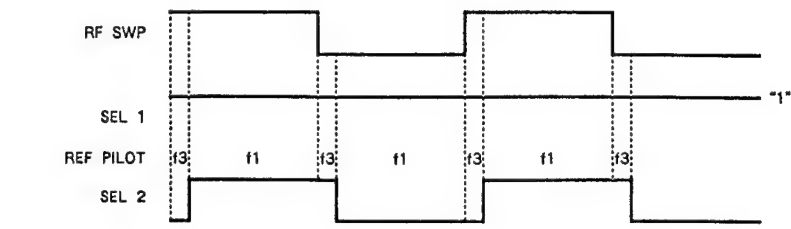
TIMING CHART 2 (PB)



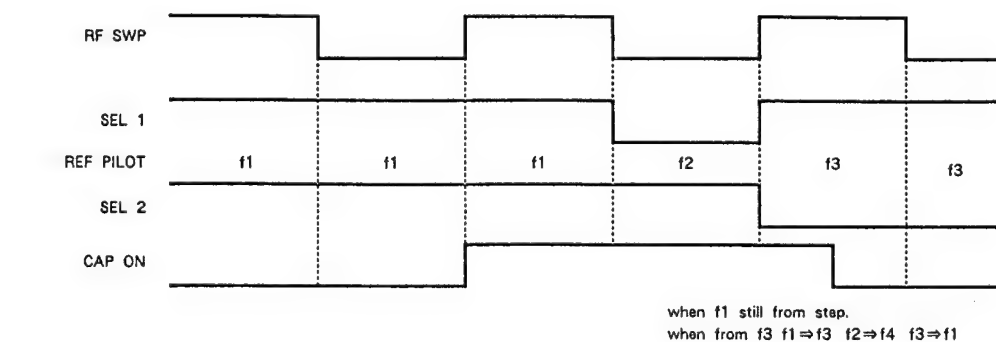
TIMING CHART 3 (CUE/REVIEW)



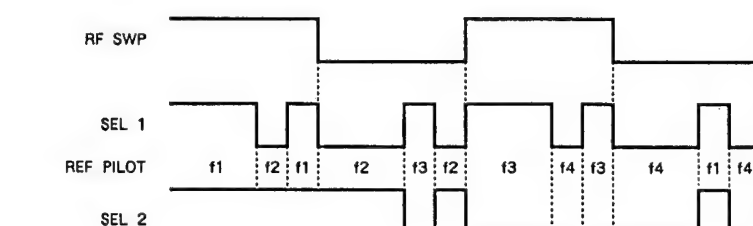
TIME CHART (X2)



TIME CHART (SLOW)



TIME CHART (AF REC)





4-8. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (CM-15 BOARD IC401)

SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL
$\overline{\text{SYSCON SCK}}$	I	IC401 ③⑨ Pin	1V period "L" pulse train
CLOG	I	IC401 ⑤⑦ Pin	Normal playback: "L" ("H" when PB RF signal is not reproduced due to head clog, etc.)
PB SP/ $\overline{\text{LP}}$	I	IC401 ⑤⑨ Pin	Recording speed mode detection signal in FF, REW, CUE or REVIEW ("H" in SP mode, "L" in LP mode)
UNLD	O	IC401 ②⑩ Pin	Normally: "L" ("H" in Unthreading, pulse is output in Mechanical mode transition)
LD	O	IC401 ②⑪ Pin	Normally: "L" ("H" in Threading, "H" pulse is output in Mechanical mode transition)
FL UNLD	O	IC401 ②⑬ Pin	Normally: "L" ("H" in Front roading)
LD	O	IC401 ②⑭ Pin	Normally: "L" ("H" in Front unroading)
FERA	O	IC401 ③ Pin	Normally: "L" ("H" in After recording mask eria)
$\overline{\text{DRUM ACCELL}}$	O	IC401 ⑤ Pin	Normally: "L" (An instant "L" in slow)
DRUM BRAKE	O	IC401 ⑥ Pin	Normally: "L" ( An instant "H" in LP slow)
H CHG MECHA	O	IC401 ⑩ Pin	Normally: "L", when slow, $\times 2$ and STILL is unphase ("H":SP head side, "L": LP head side)
C GAIN UP	O	IC401 ⑬ Pin	Normally: "L" ("H" in FF/REW)
REEL LED	O	IC401 ⑲ Pin	Reel led flicker pulse
PCM REC INH	O	IC401 ⑲ Pin	Normally: "H" ("L" in PCM REC)
AF REC	O	IC401 ⑳ Pin	Normally: "L" ("H" in After recording)
$\overline{\text{LP CH SHORT}}$	O	IC401 ④ Pin	"L" during SP head playback, "H" during LP head playback.
$\overline{\text{SP CH SHORT}}$	O	IC401 ⑦ Pin	"L" during LP head playback, "H" during SP head playback.
PAL V	O	IC401 ⑨ Pin	20 msec cycle pulse. "H" for 1 msec.
COUNTER SP/ $\overline{\text{LP}}$ RF	O	IC401 ⑬ Pin	Normally "L". "H" when C/R, FF/REW.
PCM PB	O	IC401 ⑲ Pin	"H" during PCM playback.

4-9. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE (CM-15 BOARD IC401, CN401)

SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL																
S REEL FG	I	CM-15 CN405 ⑫ Pin	Pulse (5.0Vp-p) that is generated by S-reel rotation. It is approx. 1sec period in REC/PB (SP) mode.																
MODE SW 2	I	UC-4 CN001 ④ Pin	<div>Pins are connected to mode switch for mechanical position.</div> <table><tr><th></th><th>EJECTED</th><th>THREADING UNTHREADING</th><th>STOP</th></tr><tr><td>MODE SW 2(④-⑦)</td><td>○</td><td>×</td><td>×</td></tr><tr><td>MODE SW 1(⑤-⑦)</td><td>○</td><td>○</td><td>○</td></tr><tr><td>MODE SW 0(⑥-⑦)</td><td>×</td><td>×</td><td>○</td></tr></table>		EJECTED	THREADING UNTHREADING	STOP	MODE SW 2(④-⑦)	○	×	×	MODE SW 1(⑤-⑦)	○	○	○	MODE SW 0(⑥-⑦)	×	×	○
	EJECTED	THREADING UNTHREADING		STOP															
MODE SW 2(④-⑦)	○	×		×															
MODE SW 1(⑤-⑦)	○	○		○															
MODE SW 0(⑥-⑦)	×	×		○															
MODE SW 1	I	UC-4 CN001 ⑤ Pin																	
MODE SW 0	I	UC-4 CN001 ⑥ Pin																	
M OUT 0 (COM)	O	UC-4 CN001 ⑦ Pin																	
CC DOWN	I	UC-4 CN001 ⑧ Pin	It is connected to cassette compartment down detection switch. When cassette compartment comes down, Pins ⑧ and ⑨ are shorted and circuited.																
M OUT 0 (COM)	O	UC-4 CN001 ⑦ Pin	When cassette compartment comes up, connection between Pins ⑧ and ⑦ open.																
END SENS	I	CM-15 CN405 ① Pin	Normally: "L" ("H" pulse is output in tape end or cassette end)																
13/10	I	UC-4 CN001 ⑬ Pin	"L" pulse when a thick tape using.																
M OUT 1 (COM)	O	CM-15 CN405 ⑧ Pin	13/10, MP, COM of REC PROOF SW. Always "L" pulse.																
MP HG	I	CM-15 CN405 ⑫ Pin	"L" pulse (20msec period) is output when normal MP tape is used.																
TOP END LED	I	CM-15 CN405 ⑦ Pin	"L" pulse (approx. 1Vp-p) (pulse period is changed from 10msec to 20msec according to operation mode.)																
TOP SENS	O	CM-15 CN405 ⑪ Pin	Normally: "L" ("H" pulse is output in tape or cassette unloading)																
ME/MP	I	UC-4 CN002 ② Pin	"H" in MP tape ("L" pulse (20msec period) in cassette unloading)																
REC PROOF	I	UC-4 CN002 ④ Pin	"H" when recording possible cassette is loaded "L" pulse (20msec period) is output, when recording in inh mode is loaded.																
T REEL FG	I	CM-15 CN405 ⑫ Pin	Pulse (5.0Vp-p) that is generated by T-reel rotation, in F mode, it is approx. 1sec period.																



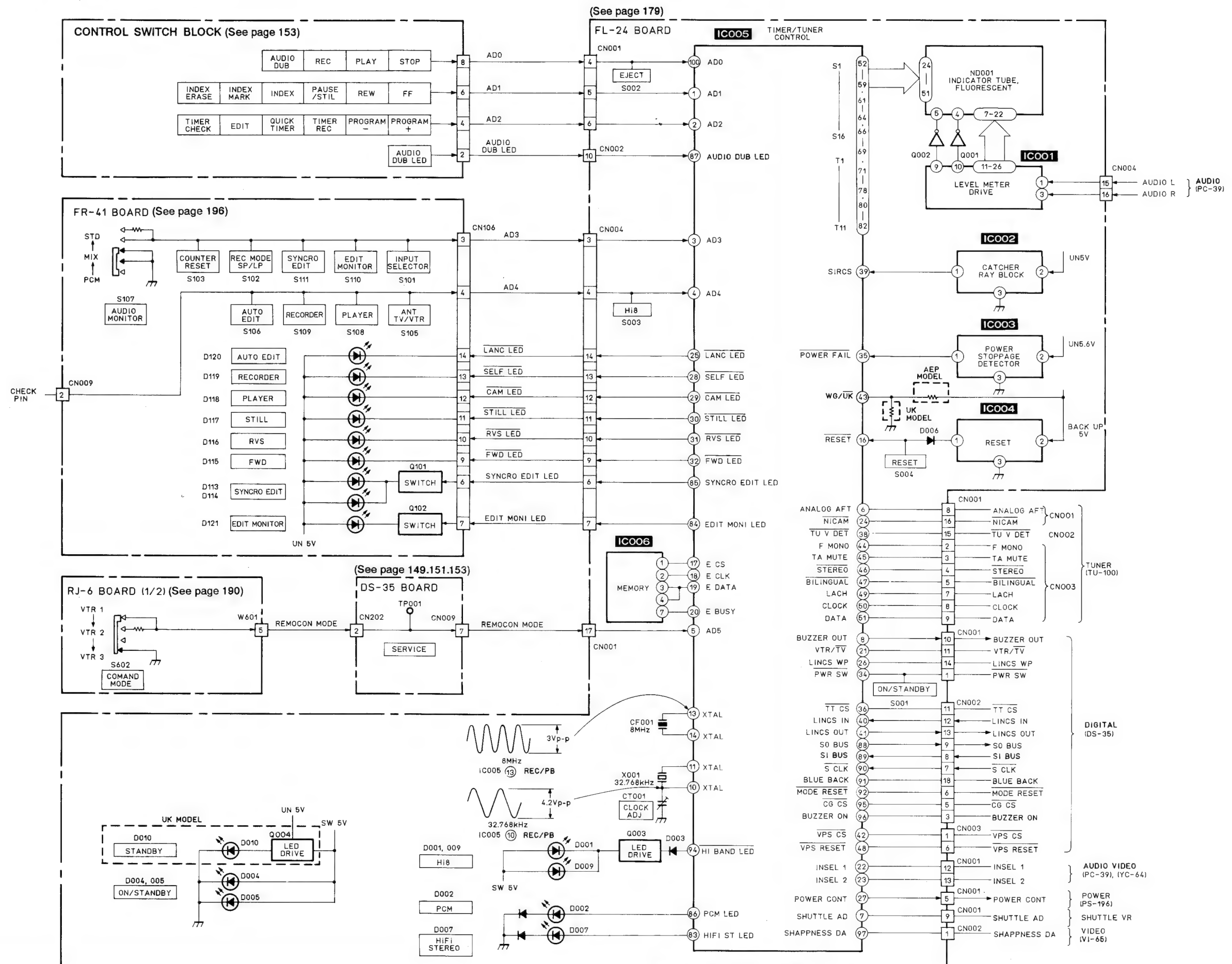
# M BLOCK INTERFACE (CM-15 BOARD IC401, CN405, UC-4 BOARD)

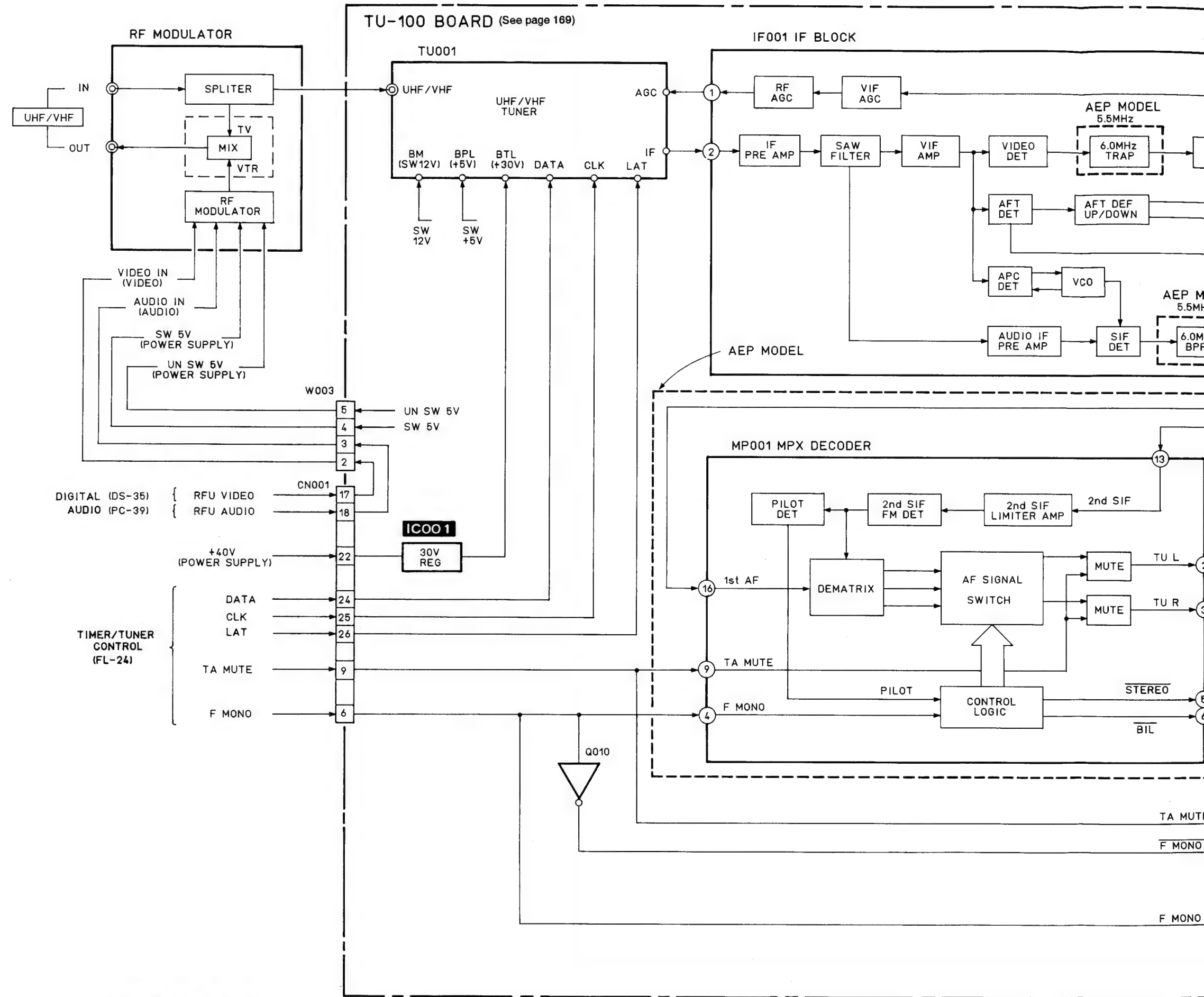
INPUT OUTPUT LEVEL				
Pulse (5.0Vp-p) that is generated by S-reel rotation. It is approx. 1sec period in REC/PB (SP) mode.				
Pins are connected to mode switch for mechanical position detection.				
	EJECTED	THREADING UNTHREADING	STOP	REC/PB/FF/ REW/CUE/ REVIEW/PAUSE
MODE SW 2(④-⑦)	○	×	×	○
MODE SW 1(⑤-⑦)	○	○	○	×
MODE SW 0(⑥-⑦)	×	×	○	○
<div> <div>×</div>...Open <div>○</div>...Short </div>				
It is connected to cassette compartment down detection (CC DOWN) switch. When cassette compartment comes down, Pins ⑧ and ⑦ are short-circuited. When cassette compartment comes up, connection between Pins ⑧ and ⑦ open.				
Normally: "L" ("H" pulse is output in tape end or cassette unloaded)				
"L" pulse when a thick tape using.				
13/10, MP, COM of REC PROOF SW. Always "L" pulse.				
"L" pulse (20msec period) is output when normal MP tape is used.				
"L" pulse (approx. 1Vp-p) (pulse period is changed from 12 to 170msec according to operation mode.)				
Normally: "L" ("H" pulse is output in tape or cassette unloaded)				
"H" in MP tape ("L" pulse (20msec period) in cassette unloaded)				
"H" when recording possible cassette is loaded "L" pulse (20msec period) is output, when recording inhibiting cassette is loaded.				
Pulse (5.0Vp-p) that is generated by T-reel rotation, in REC/PB (SP) mode, it is approx. 1sec period.				

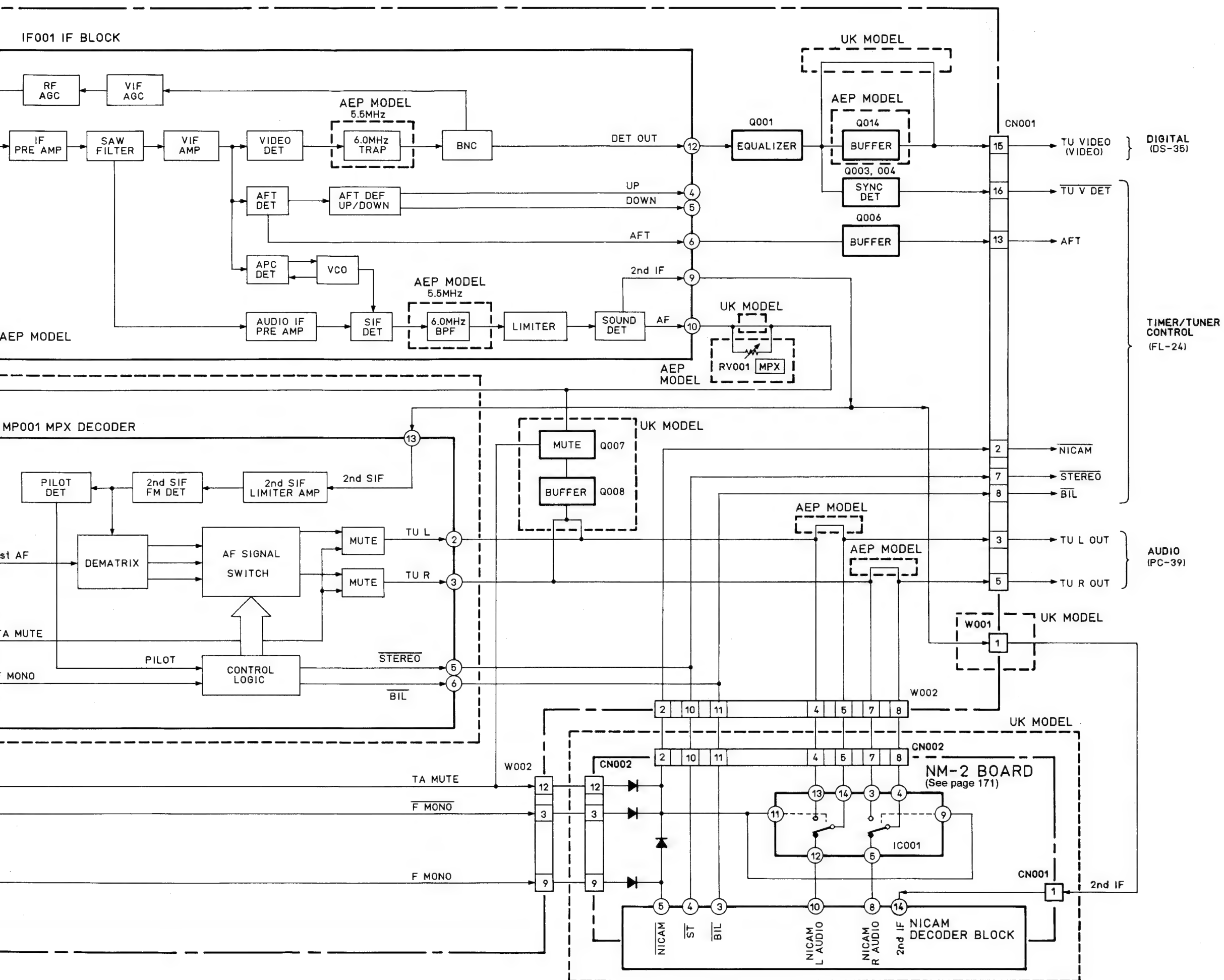
# 4-10. MODE CONTROL PERIPHERAL CIRCUIT INTERFACE (IC001 ON DS-35 BOARD)

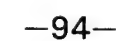
SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL
AFM MUTE 1	O	① Pin	"L" when AUDIO MONITOR switch is PCM.
AFM MUTE 2	O	② Pin	"L" when AUDIO MONITOR switch is PCM.
OUTPUT SEL 1	O	③ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
OUTPUT SEL 2	O	④ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
OUTPUT SEL 3	O	⑤ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
OUTPUT SEL 4	O	⑥ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
PCM ACT	I	⑩ Pin	"H" during PCM recorded tape playback.
AF ST	O	⑪ Pin	"L" during AFM STEREO recorded tape playback.
TIMER TITLE	O	⑮ Pin	"H" during TIMER TITLE recording.
AF BIL DET	I	⑲ Pin	"L" during AFM BILINGUAL recorded tape playback.
AF ST DET	I	⑳ Pin	"H" during AFM STEREO recorded tape playback.
S1	I	㉑ Pin	"L" when S terminal is connected on the rear side.
S2	I	㉒ Pin	"L" when S terminal is connected on the front side.
HI BAND	I	㉔ Pin	"H" during HI BAND recorded tape playback.
MAKER CS	O	㉗ Pin	1V cycle "L" pulse (only when the power is on).
PCM RAM CS	O	㉘ Pin	1V cycle "L" pulse (only when the power is on).
TT CS	O	㉙ Pin	1V cycle "L" pulse.
MECHA CS	O	㊱ Pin	1V cycle "L" pulse (only when the power is on).
LINCS P COST	O	㊲ Pin	"H" when the power is on and LANC M/S=S.
PAL	O	㊳ Pin	"H" when COLOUR SYSTEM SELECT SW is PAL.
V MUTE	O	㊴ Pin	"H" during VIDEO MUTE.
SYS RESET	O	㊵ Pin	"H" when the power is on.
MPHG/MP	O	㊶ Pin	"H" when MPHG cassette is in.
ME/MP	O	㊷ Pin	"H" when ME cassette is in.
HI/NOR	O	㊸ Pin	"H" during HI BAND recorded tape playback.
OUT PB	O	㊹ Pin	"H" during playback.
VIDEO PB	O	㊺ Pin	"H" during playback.
AUDIO PB	O	㊻ Pin	"H" during playback. (However, "L" when AUDIO INCERT.)
AF BIL	O	㊼ Pin	"L" during AFM BILINGUAL recorded tape playback.
AUDIO ATT	O	㊽ Pin	"L" during INDEX MARK on playback.
X2	O	㊾ Pin	X2



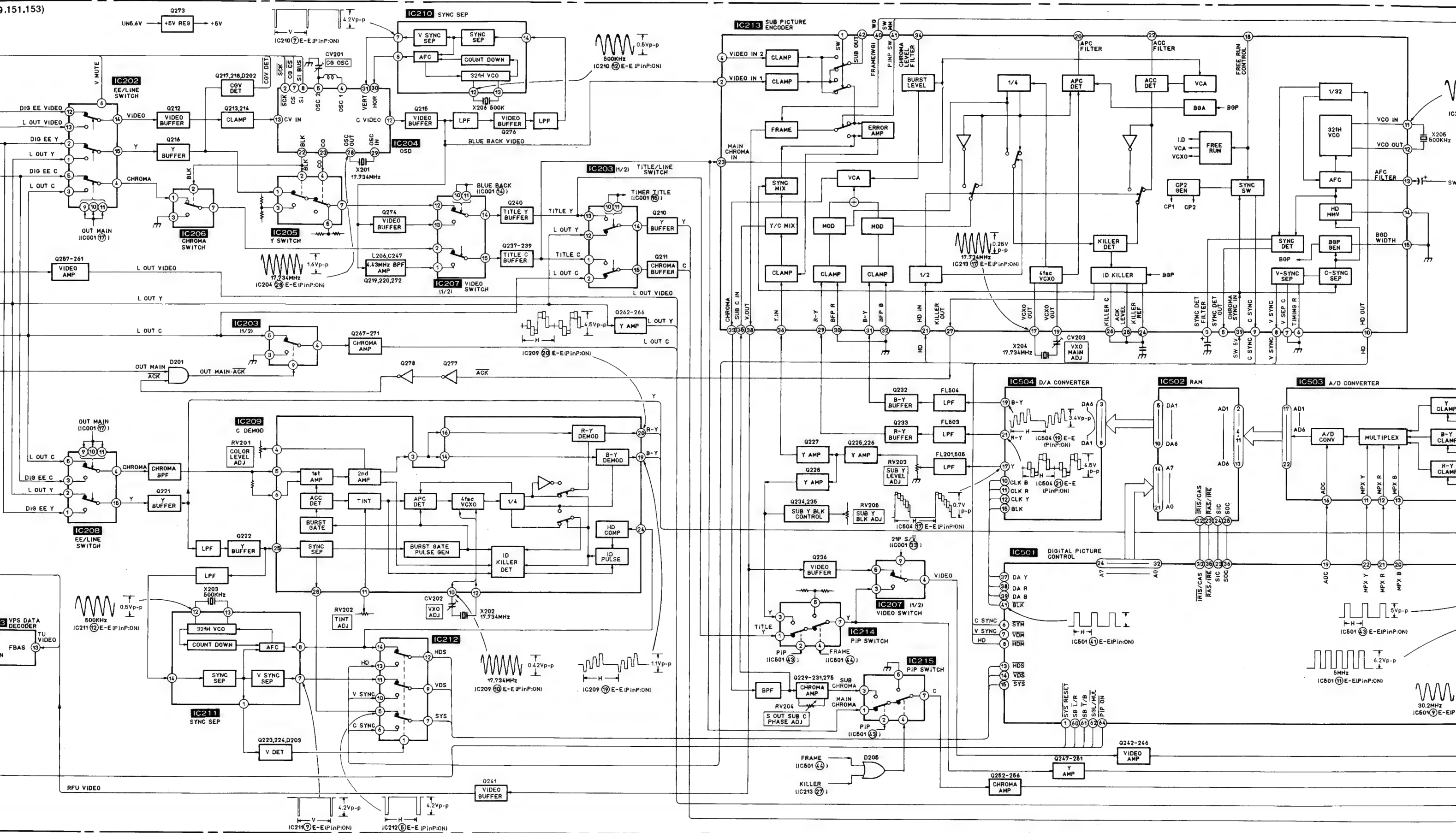






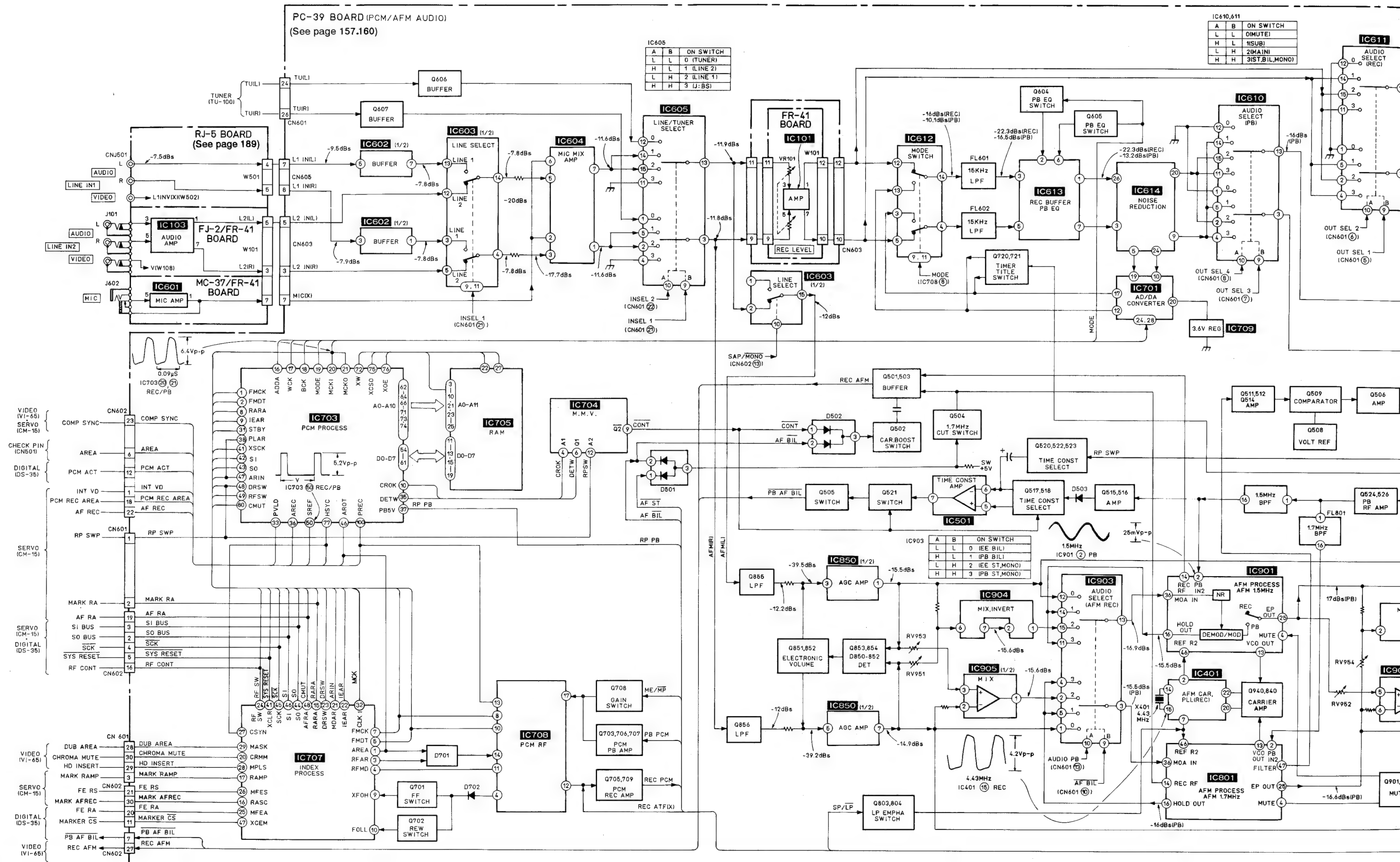




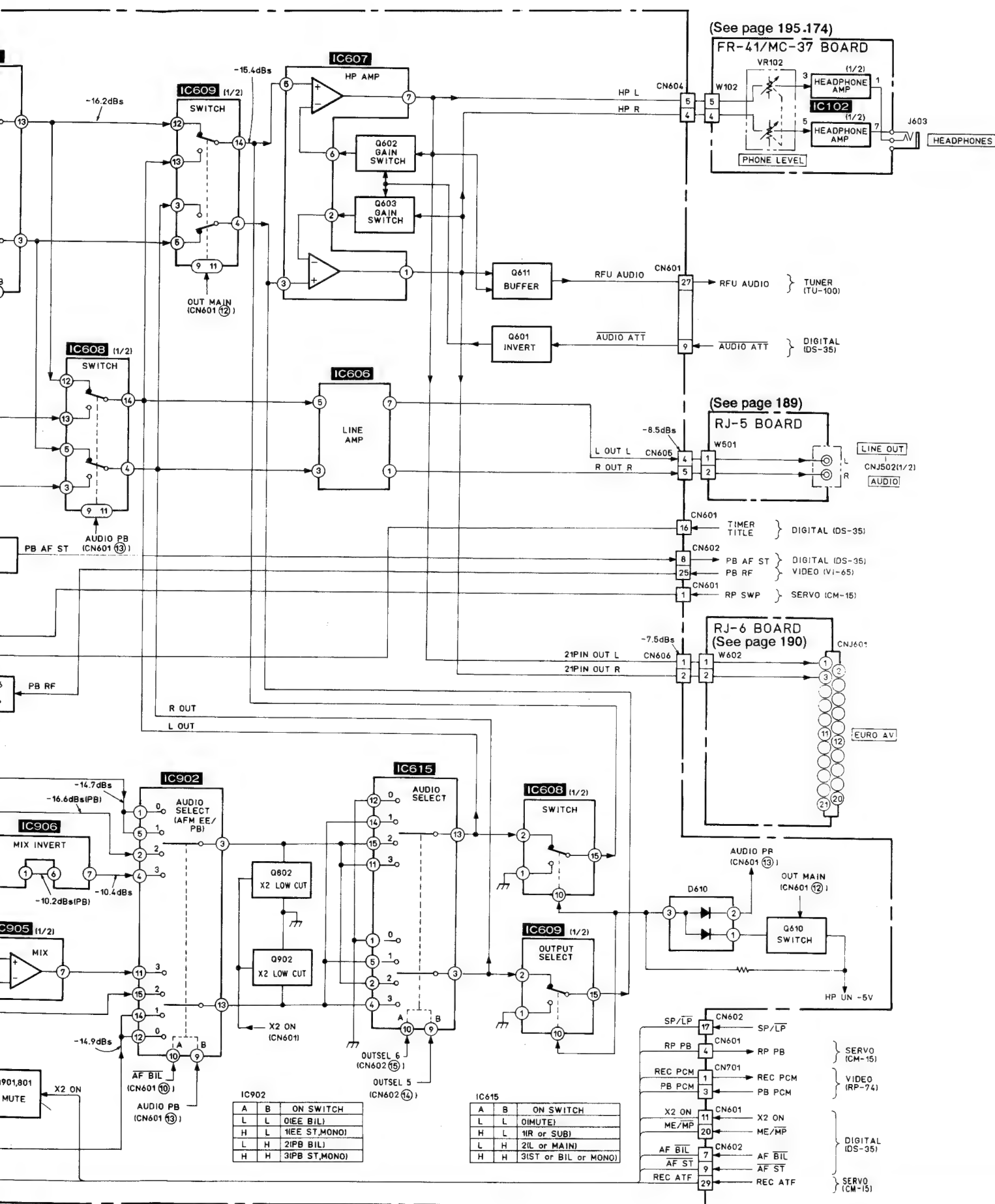








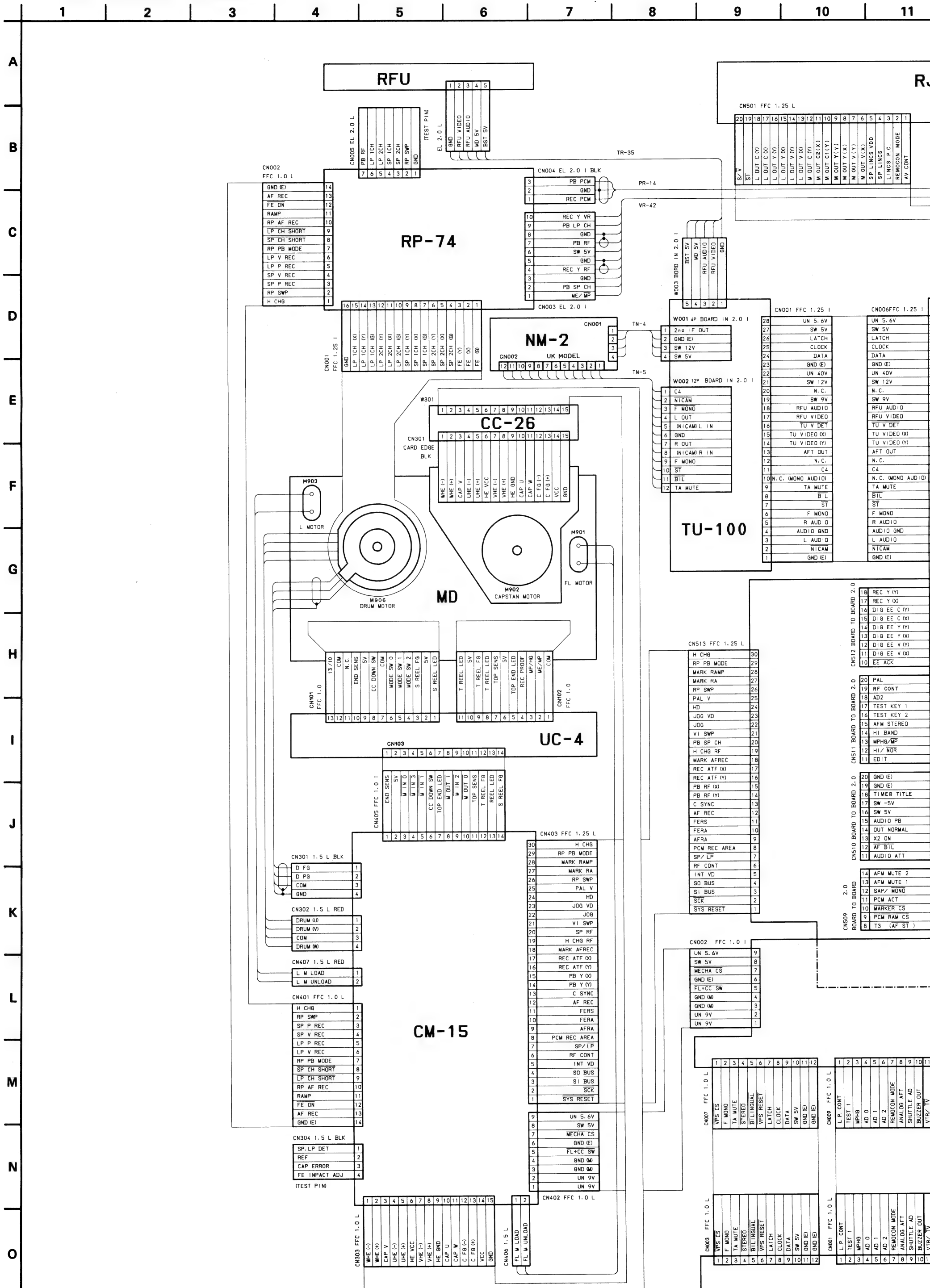




## SECTION 5

## PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

5-1. FRAME SCHEMATIC DIAGRAM

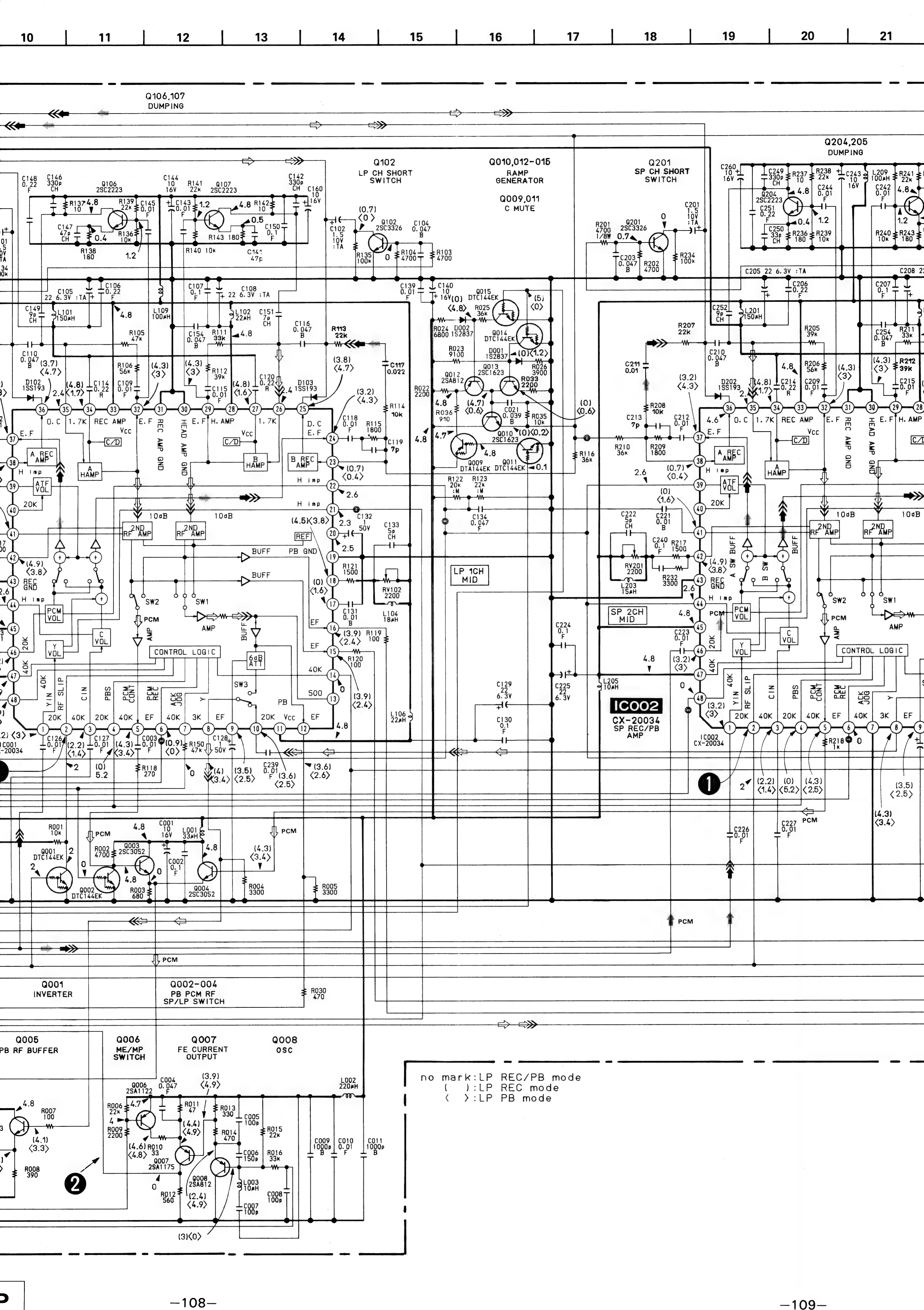








	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC			▶▶▶▶	▶▶▶▶
PB			◀▶▶▶	▶▶▶▶



no mark: LP REC/PB mode  
( ): LP REC mode  
< >: LP PB mode

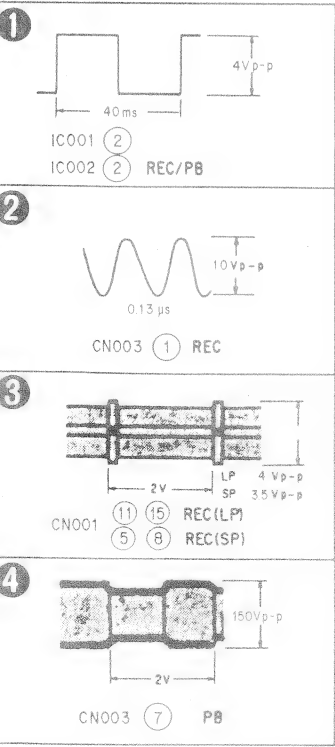
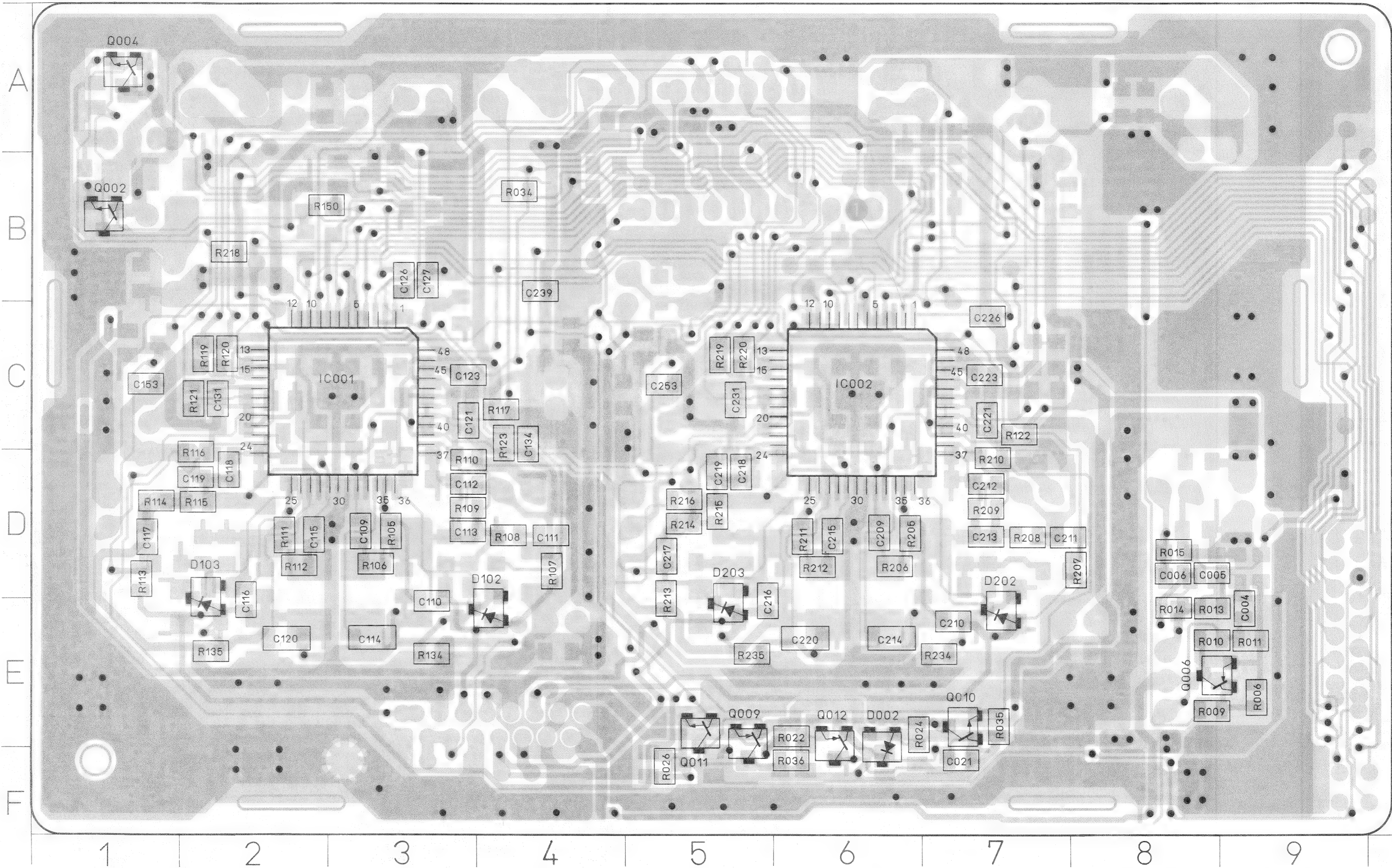




RP-74 BOARD

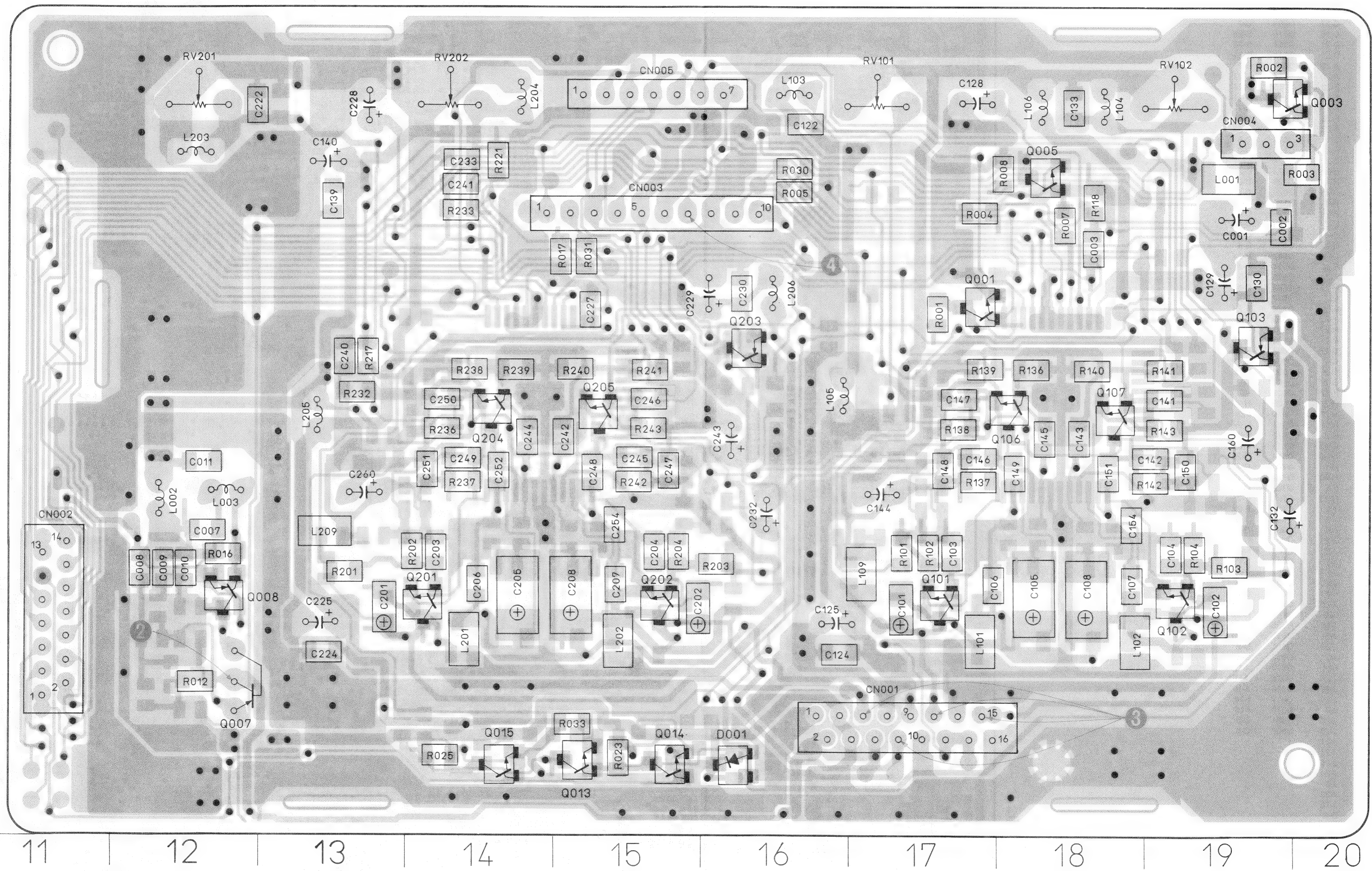
- |       |      |
|-------|------|
| D001  | F-16 |
| D002  | E-6  |
| D102  | E-4  |
| D103  | D-2  |
| D202  | E-7  |
| D203  | D-5  |
| IC001 | C-3  |
| IC002 | C-6  |
| Q001  | B-17 |
| Q002  | B-1  |
| Q003  | B-19 |
| Q004  | A-1  |
| Q005  | B-18 |
| Q006  | E-8  |
| Q007  | E-12 |
| Q008  | D-12 |
| Q009  | E-5  |
| Q010  | E-7  |
| Q011  | E-5  |
| Q012  | E-6  |
| Q013  | F-15 |
| Q014  | F-15 |
| Q015  | F-14 |
| Q101  | D-17 |
| Q102  | D-19 |
| Q103  | C-19 |
| Q106  | C-18 |
| Q107  | C-18 |
| Q201  | D-14 |
| Q202  | D-15 |
| Q203  | C-16 |
| Q204  | C-14 |
| Q205  | C-15 |

RP-74 BOARD (COMPONENT SIDE)





RP-74 BOARD (CONDUCTOR SIDE)



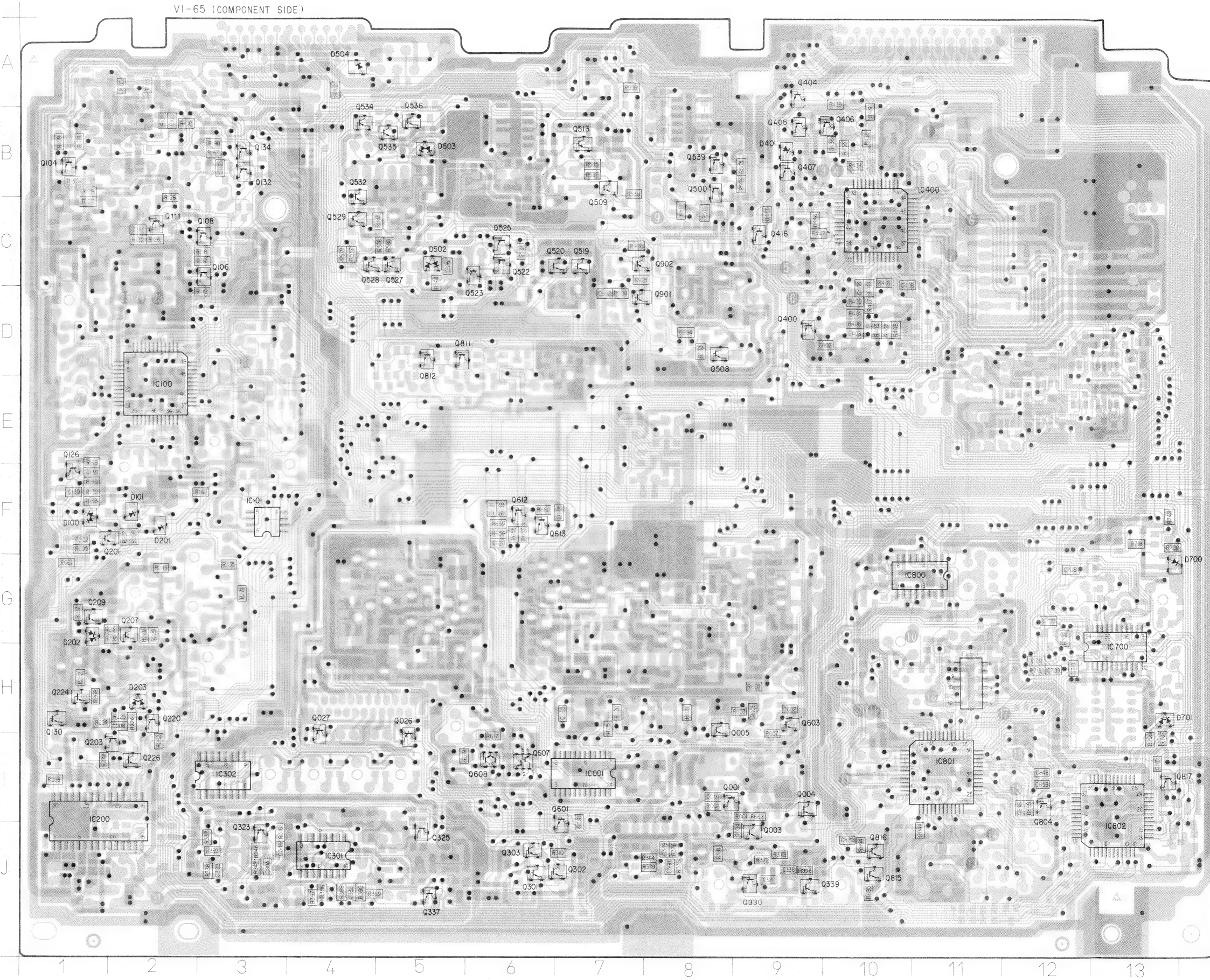


VI-65 (VIDEO SIGNAL PROCESS) PRINTED WIRING BOARD

- Ref. No.: VI-65 Board; 2,000 series -

PC-65 BOARD

D001	F-22	Q106	C-3	Q501	B-20
D002	G-21	Q107	C-26	Q502	C-20
D003	G-21	Q108	C-3	Q503	C-21
D004	F-20	Q109	B-26	Q504	D-21
D005	I-22	Q110	B-26	Q505	D-21
D006	G-20	Q111	C-2	Q506	D-21
D007	H-24	Q112	B-27	Q507	C-21
D008	G-21	Q113	B-28	Q508	D-8
D009	H-21	Q114	C-27	Q509	C-7
D100	F-1	Q116	C-28	Q510	B-22
D101	F-2	Q117	D-27	Q511	B-22
D102	D-28	Q118	D-26	Q512	B-21
D200	F-27	Q119	A-26	Q513	B-7
D201	F-2	Q120	A-26	Q514	C-22
D202	G-1	Q121	E-26	Q515	B-23
D203	H-2	Q122	E-26	Q518	A-21
D300	J-23	Q123	F-26	Q519	C-7
D301	J-23	Q124	F-26	Q520	C-7
D302	J-24	Q125	F-27	Q521	C-23
D303	A-18	Q126	E-1	Q522	C-6
D400	D-19	Q127	F-28	Q523	D-6
D401	B-9	Q128	E-27	Q524	C-22
D402	A-19	Q129	E-27	Q525	C-6
D404	D-18	Q130	H-1	Q526	C-24
D500	C-20	Q131	D-27	Q527	C-5
D501	C-21	Q132	B-3	Q528	C-4
D502	C-5	Q133	B-26	Q529	C-4
D503	B-5	Q134	B-3	Q530	C-25
D504	A-4	Q135	B-27	Q531	C-24
D700	G-14	Q136	B-26	Q532	B-4
D701	H-14	Q140	C-26	Q533	B-24
D702	G-16	Q200	F-28	Q534	B-4
D703	H-16	Q201	F-2	Q535	B-5
D704	J-17	Q202	H-27	Q536	B-5
D800	I-17	Q203	I-1	Q537	A-24
		Q204	I-27	Q538	A-24
IC001	I-7	Q205	H-27	Q539	B-8
IC002	H-21	Q206	H-27	Q601	I-7
IC003	H-24	Q207	G-2	Q602	H-20
IC100	E-2	Q208	G-28	Q603	H-9
IC101	F-3	Q209	G-1	Q604	H-19
IC200	I-1	Q210	G-27	Q605	I-19
IC301	J-4	Q211	G-27	Q607	I-6
IC302	I-3	Q212	F-27	Q608	I-6
IC400	C-10	Q213	H-26	Q609	H-23
IC500	B-24	Q214	H-28	Q610	I-23
IC700	H-13	Q215	H-28	Q611	H-24
IC800	G-11	Q220	H-2	Q612	F-6
IC801	I-11	Q221	G-26	Q613	F-6
IC802	J-13	Q222	G-26	Q614	H-23
IC900	A-24	Q224	H-1	Q700	G-17
		Q225	H-26	Q701	F-15
Q001	I-8	Q226	I-2	Q702	G-16
Q002	J-20	Q227	H-27	Q704	E-21
Q003	J-9	Q301	J-6	Q705	E-22
Q004	I-9	Q302	J-7	Q706	J-16
Q005	H-9	Q303	J-6	Q800	G-17
Q006	I-21	Q313	J-23	Q801	G-17
Q007	H-22	Q314	J-22	Q802	I-18
Q008	H-21	Q315	J-22	Q803	J-17
Q009	H-21	Q316	J-22	Q804	I-12
Q011	I-21	Q317	J-22	Q805	I-15
Q012	I-22	Q318	F-27	Q806	D-22
Q014	G-22	Q319	J-26	Q807	D-23
Q015	G-22	Q321	I-26	Q808	D-23
Q016	G-22	Q322	J-26	Q809	D-24
Q017	G-23	Q323	J-3	Q810	D-24
Q018	F-22	Q324	J-26	Q811	D-5
Q019	H-22	Q325	J-5	Q812	D-5
Q020	G-22	Q326	I-24	Q813	J-19
Q021	H-20	Q327	J-24	Q815	J-10
Q022	G-21	Q328	J-20	Q816	J-10
Q023	G-20	Q329	J-20	Q817	I-14
Q024	G-20	Q330	J-9	Q818	I-15
Q025	G-20	Q331	J-20	Q901	D-8
Q026	H-5	Q332	J-20	Q902	C-8
Q027	H-4	Q333	J-21		
Q029	H-23	Q334	J-21		
Q030	G-24	Q335	J-25		
Q031	G-23	Q336	J-24		
Q032	G-24	Q337	J-5		
Q033	G-24	Q338	J-23		
Q034	G-25	Q339	J-10		
Q035	G-24	Q400	D-9		
Q036	F-24	Q401	D-19		
Q038	G-24	Q402	D-18		
Q039	G-23	Q404	A-9		
Q040	G-21	Q405	B-9		
Q100	B-26	Q406	B-10		
Q101	A-27	Q407	B-9		
Q102	A-27	Q416	C-9		
Q103	A-27	Q417	D-18		
Q104	B-1	Q500	B-8		







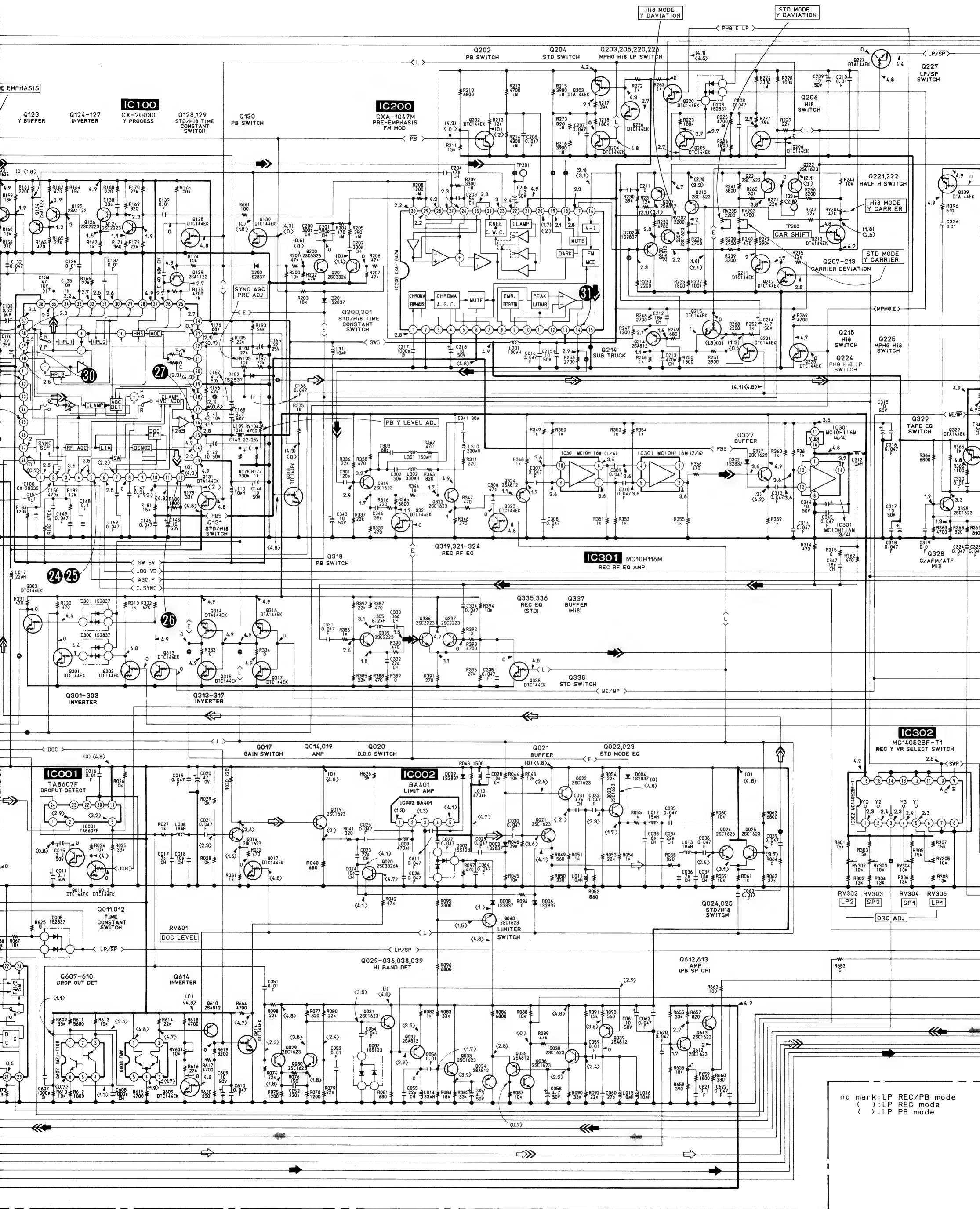


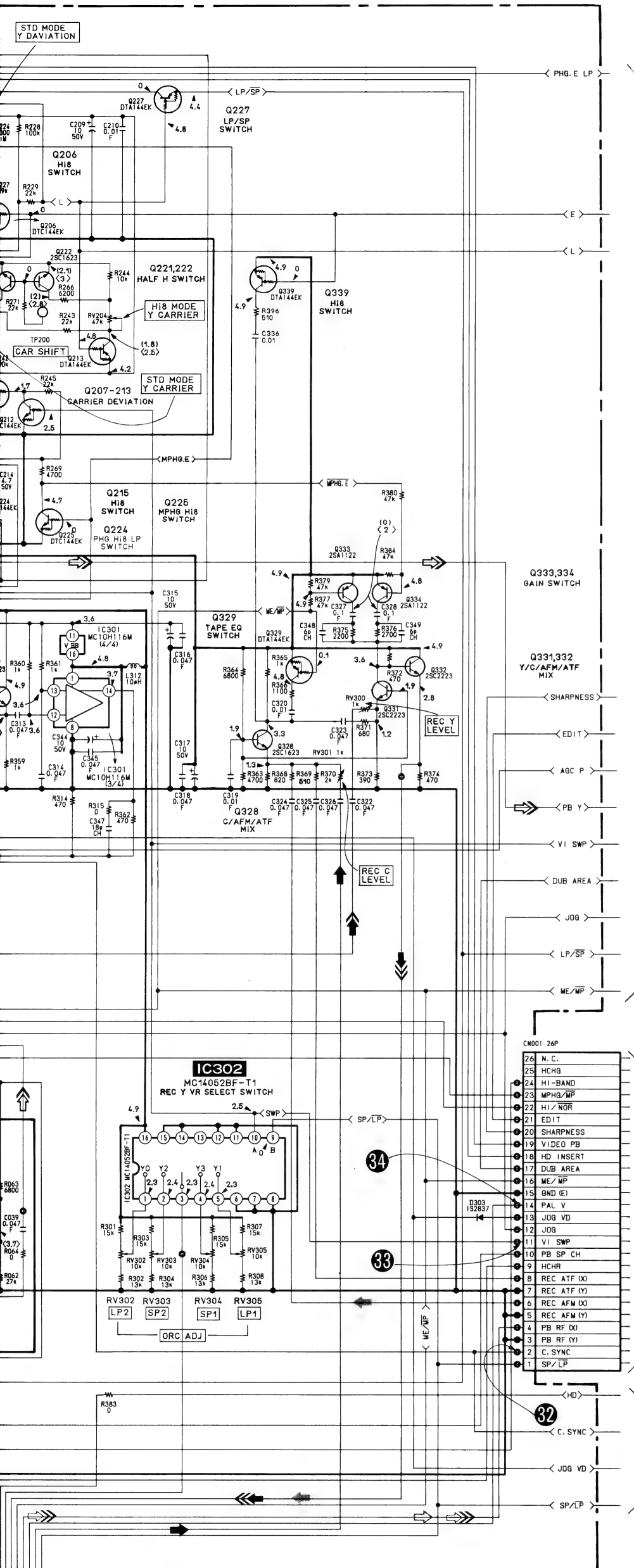
**PINOUT TABLE:**

ME/MP	1
PB SP CH	2
GND	3
REC Y RF	4
SW 5V	5
PB Y RF	6
GND	7
PB LP CH	8
REC Y VR	9
COMB OUT Y	10

**B**—  
TO VI-65  
BOARD  
(2/2)  
(See page 125)

TO RP-74  
BOARD  
CN003  
(See page 107)

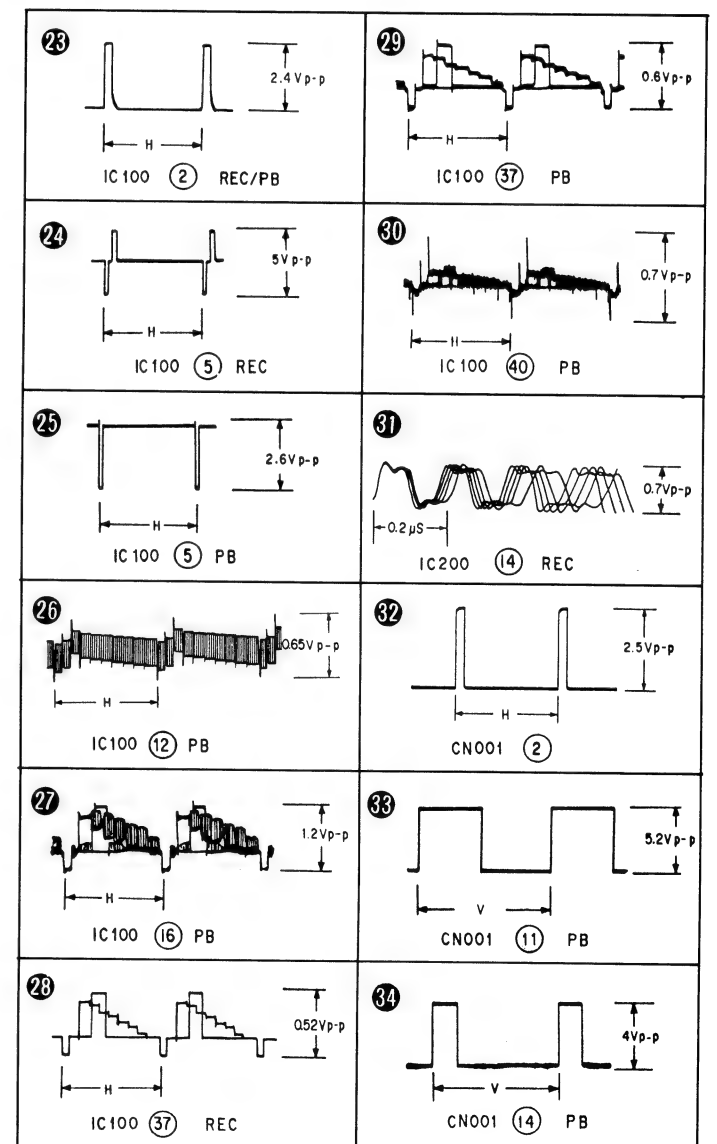




**C**  
 TO VI-65  
 BOARD  
 (2/2)  
 (See page 125)

TO IN-24  
BOARD  
(CN502)  
(See page 185)

**D**  
TO VI-65  
BOARD  
(2/2)  
(See page 125)



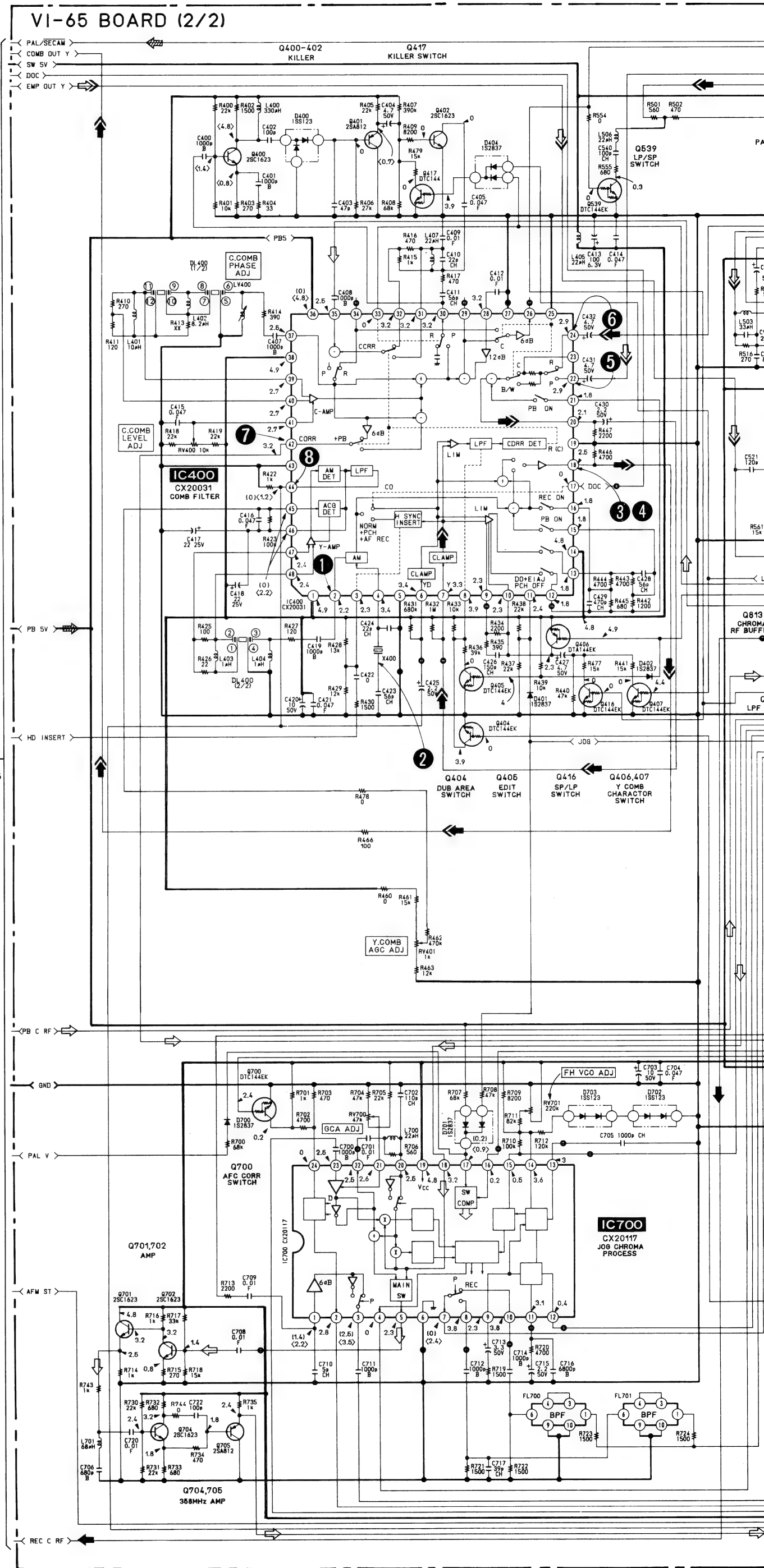
	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC	➡	➡➡	➡➡➡	➡➡
PB	➡	➡➡	➡➡➡	➡➡

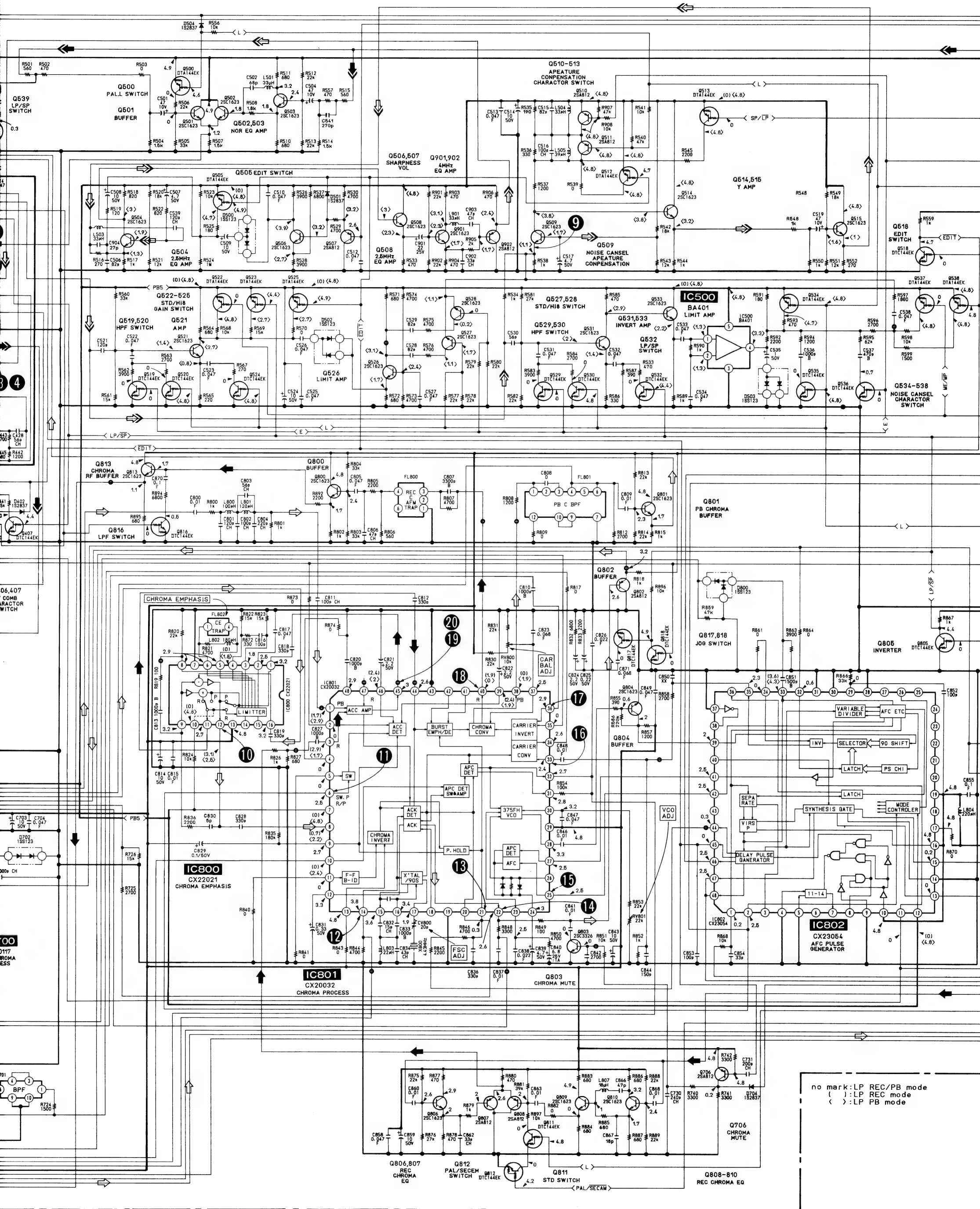


# VI-65 (VIDEO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (2/2)

— Ref. No.: VI-65 Board; 2,000 series —

**B**  
TO VI-65  
BOARD  
(1/2)  
(See page 119)









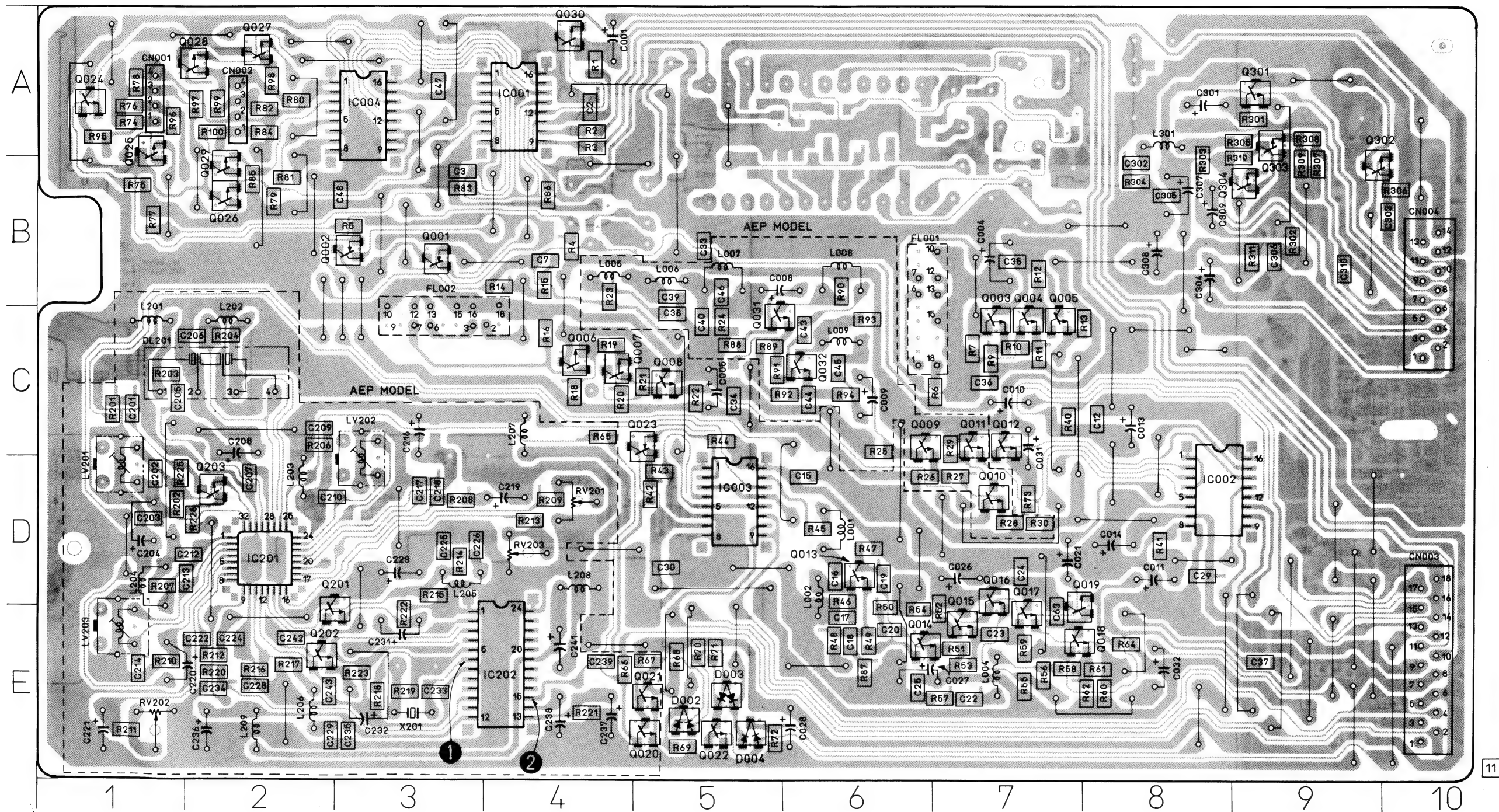
YC-64 BOARD

YC-64 BOARD

D002 E-5  
D003 E-5  
D004 E-5

IC001 A-4  
IC002 D-8  
IC003 D-5  
IC004 A-3  
IC201 D-2  
IC202 E-4

Q001 B-3  
Q002 B-3  
Q003 C-7  
Q004 C-7  
Q005 C-7  
Q006 C-4  
Q007 C-4  
Q008 C-5  
Q009 C-6  
Q010 D-7  
Q011 C-7  
Q012 C-7  
Q013 D-6  
Q014 E-6  
Q015 E-7  
Q016 D-7  
Q017 E-7  
Q018 E-8  
Q019 D-8  
Q020 E-5  
Q021 E-5  
Q022 E-5  
Q023 C-5  
Q024 A-1  
Q025 A-1  
Q026 B-2  
Q027 A-2  
Q028 A-2  
Q029 B-2  
Q030 A-4  
Q031 C-5  
Q032 C-6  
Q201 E-2  
Q202 E-2  
Q203 D-2  
Q301 A-1  
Q302 B-9  
Q303 A-1  
Q304 B-9



1

A

B

C

D

E

F

G

H

I

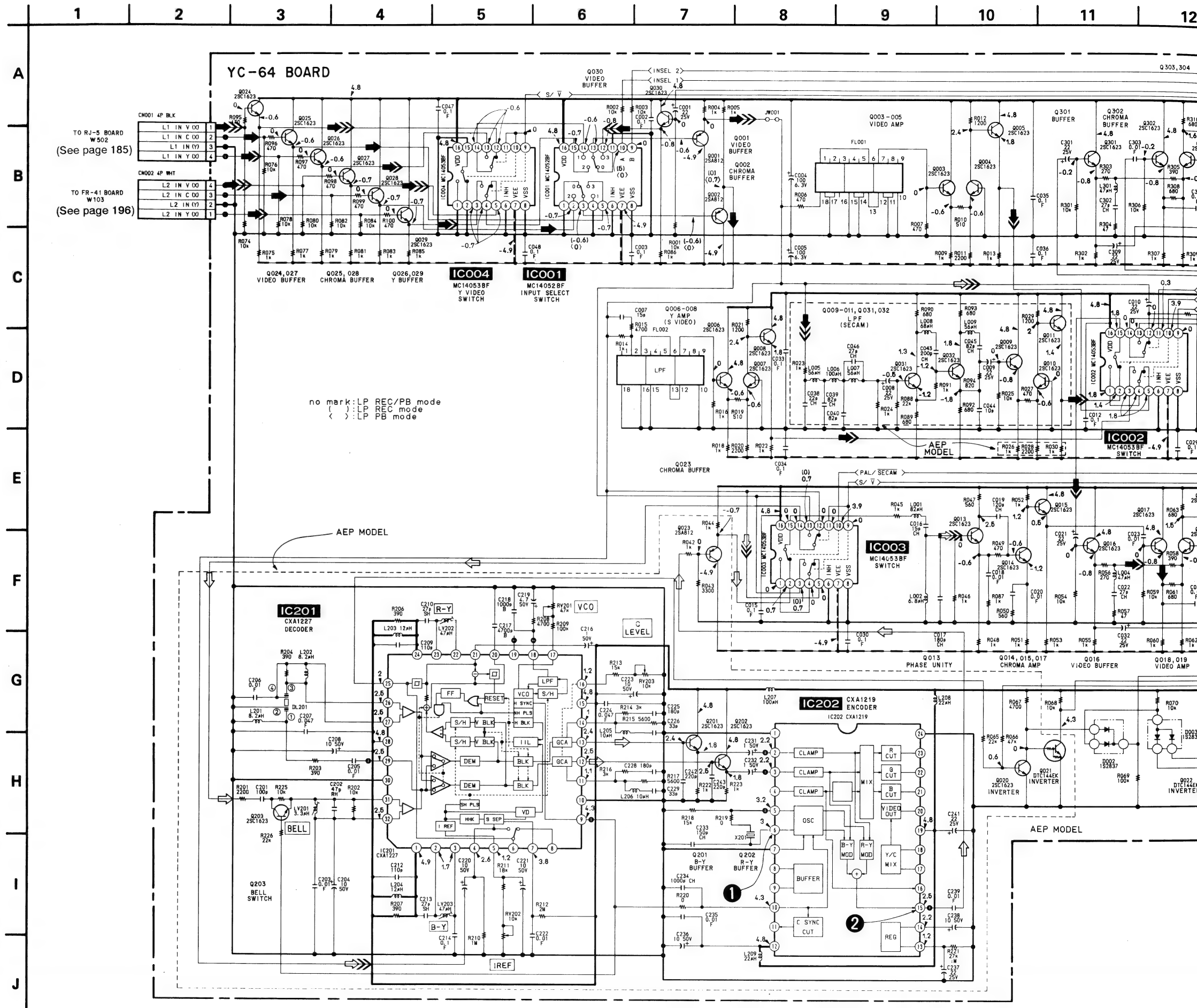
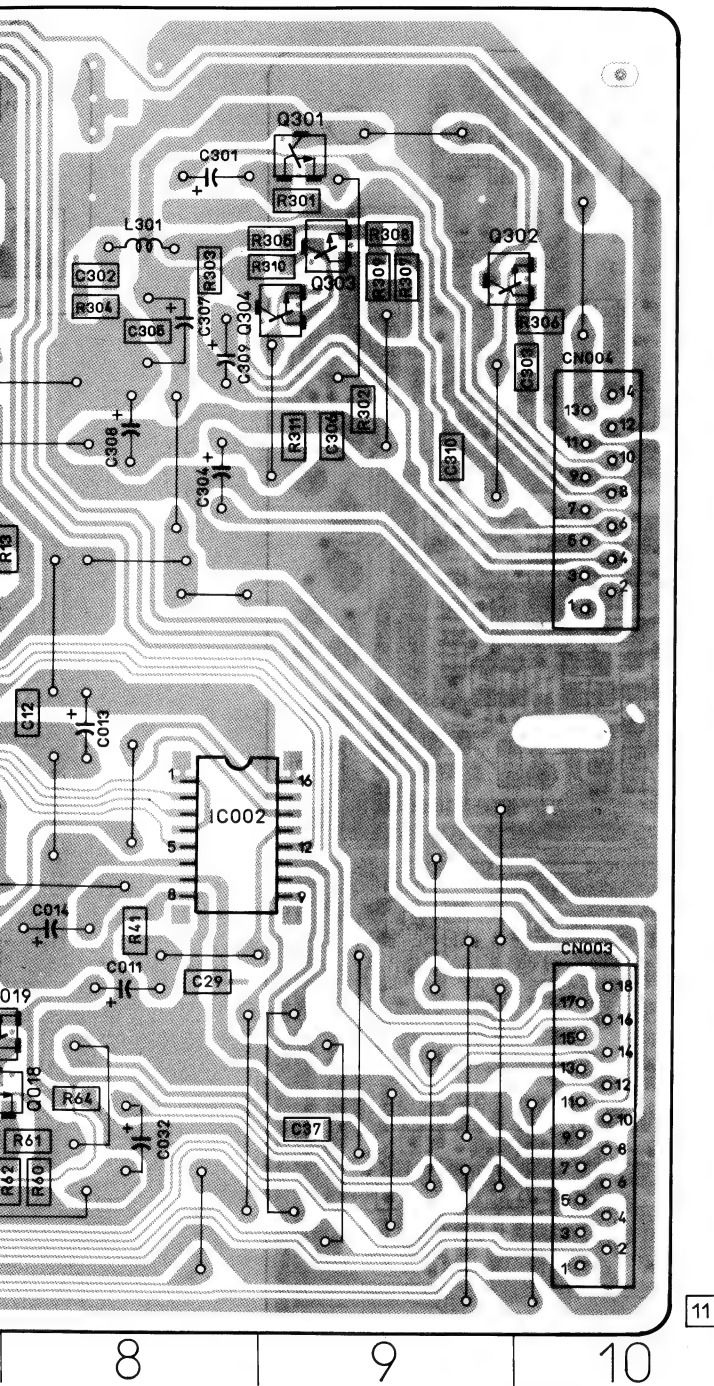
J

TO RJ-5 B0  
W502  
(See page

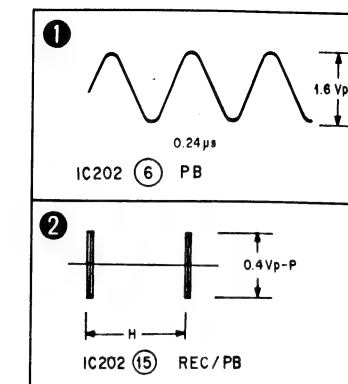
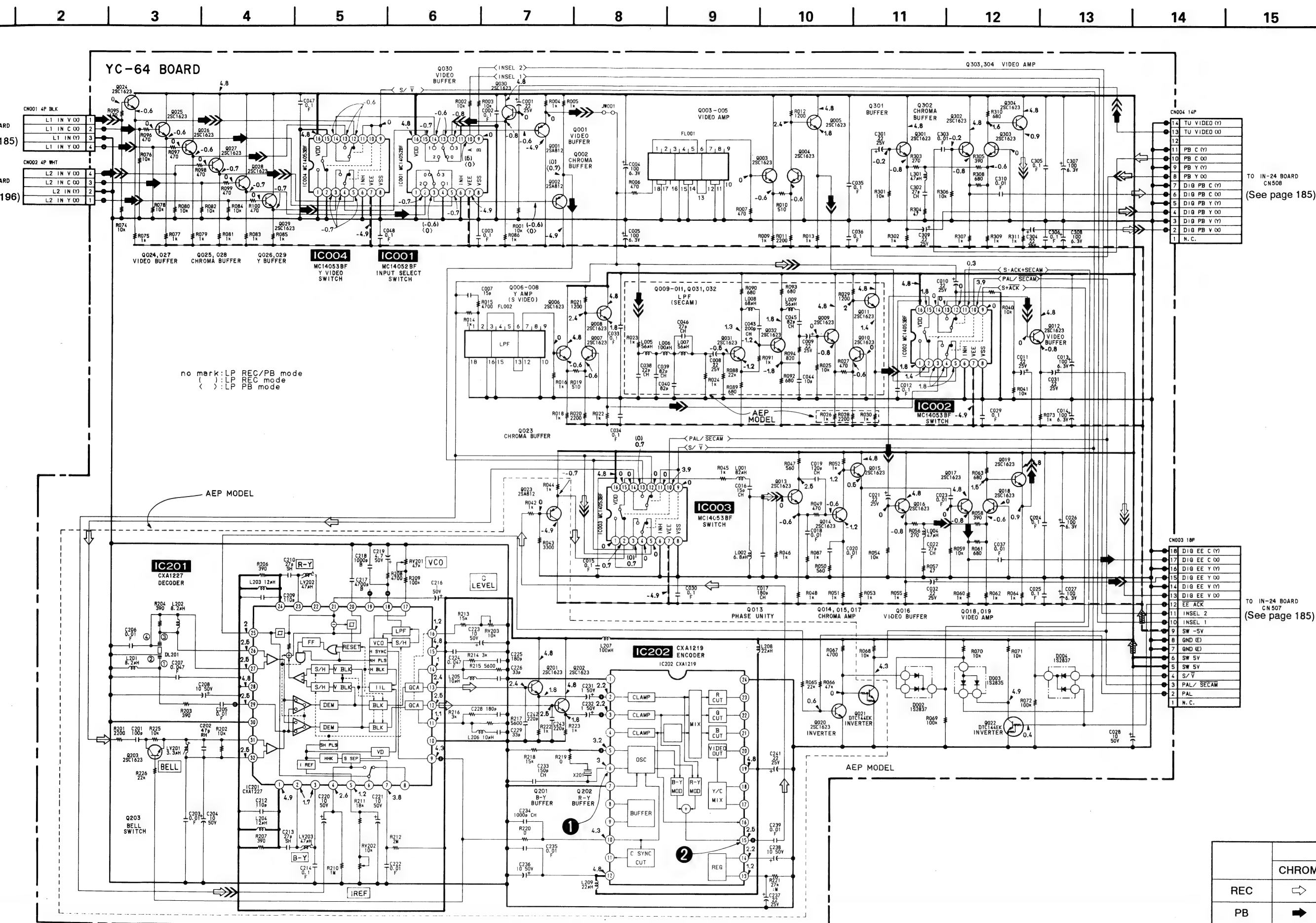
TO FR-41 B0  
W103  
(See page







# YC-64 (Y/CHROMA SIGNAL PROCESS) SCHEMATIC DIAGRAM

- Ref. No.: YC-64 Board; 3,000 series -





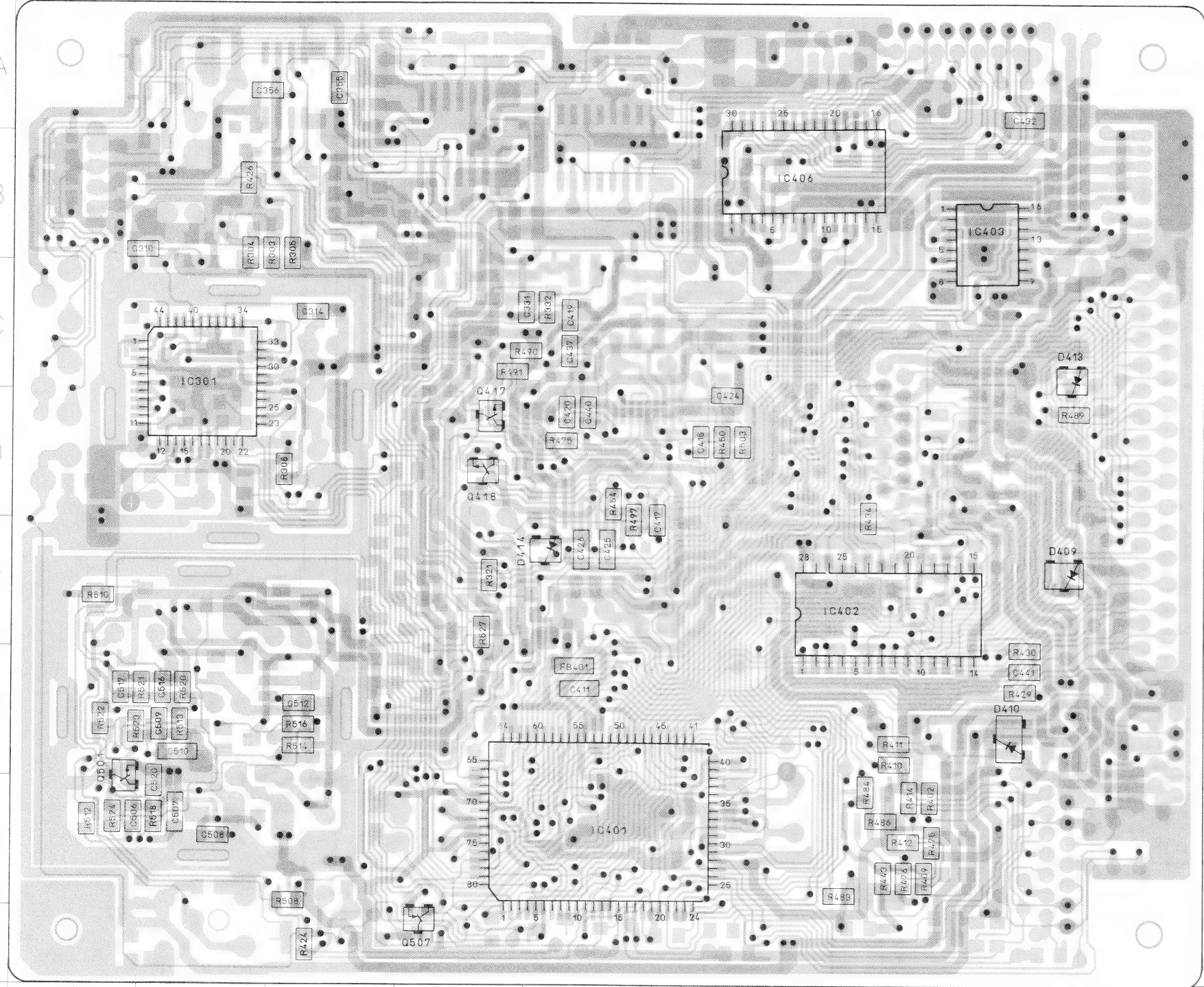


	VIDEO SIGNAL			
	CHROMA	Y	Y/CHROMA	
REC				
PB				

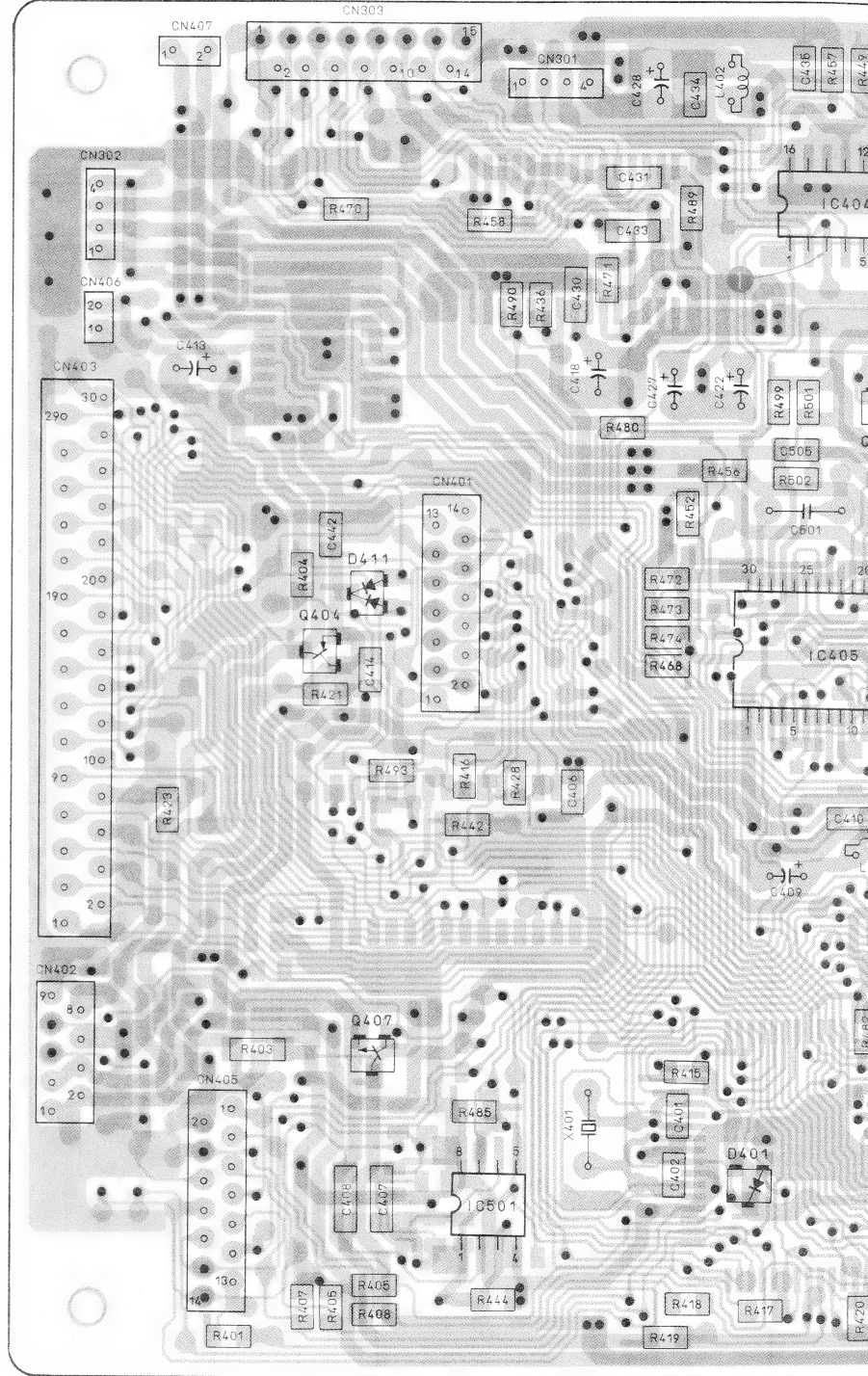
CM-15 (SERVO/SYSTEM CONTROL), UC-4, CC-26 (SIGNAL INTERMEDIATION) PRINTED WIRING BOARDS  
- Ref. No.: CN-15, UC-4, CC-26 Boards; 4,000 series -

- CM-15 BOARD
- |       |      |
|-------|------|
| D401  | G-15 |
| D409  | E-9  |
| D410  | F-8  |
| D411  | D-13 |
| D413  | C-9  |
| D414  | E-5  |
| D501  | E-18 |
| D502  | F-18 |
| D503  | E-17 |
| IC301 | C-2  |
| IC302 | B-17 |
| IC303 | A-18 |
| IC401 | G-5  |
| IC402 | E-7  |
| IC403 | B-8  |
| IC404 | B-15 |
| IC405 | D-15 |
| IC406 | B-7  |
| IC501 | G-13 |
| IC502 | F-19 |
| Q301  | C-18 |
| Q302  | D-17 |
| Q303  | E-17 |
| Q304  | C-17 |
| Q305  | C-17 |
| Q306  | C-16 |
| Q308  | A-19 |
| Q403  | F-16 |
| Q404  | D-13 |
| Q407  | F-13 |
| Q417  | D-4  |
| Q418  | D-4  |
| Q501  | F-1  |
| Q502  | F-18 |
| Q503  | F-18 |
| Q504  | E-19 |
| Q505  | F-19 |
| Q506  | H-18 |
| Q507  | H-4  |
| Q508  | H-16 |
| Q509  | F-17 |
| Q510  | F-16 |

CM-15 BOARD (COMPONENT SIDE)

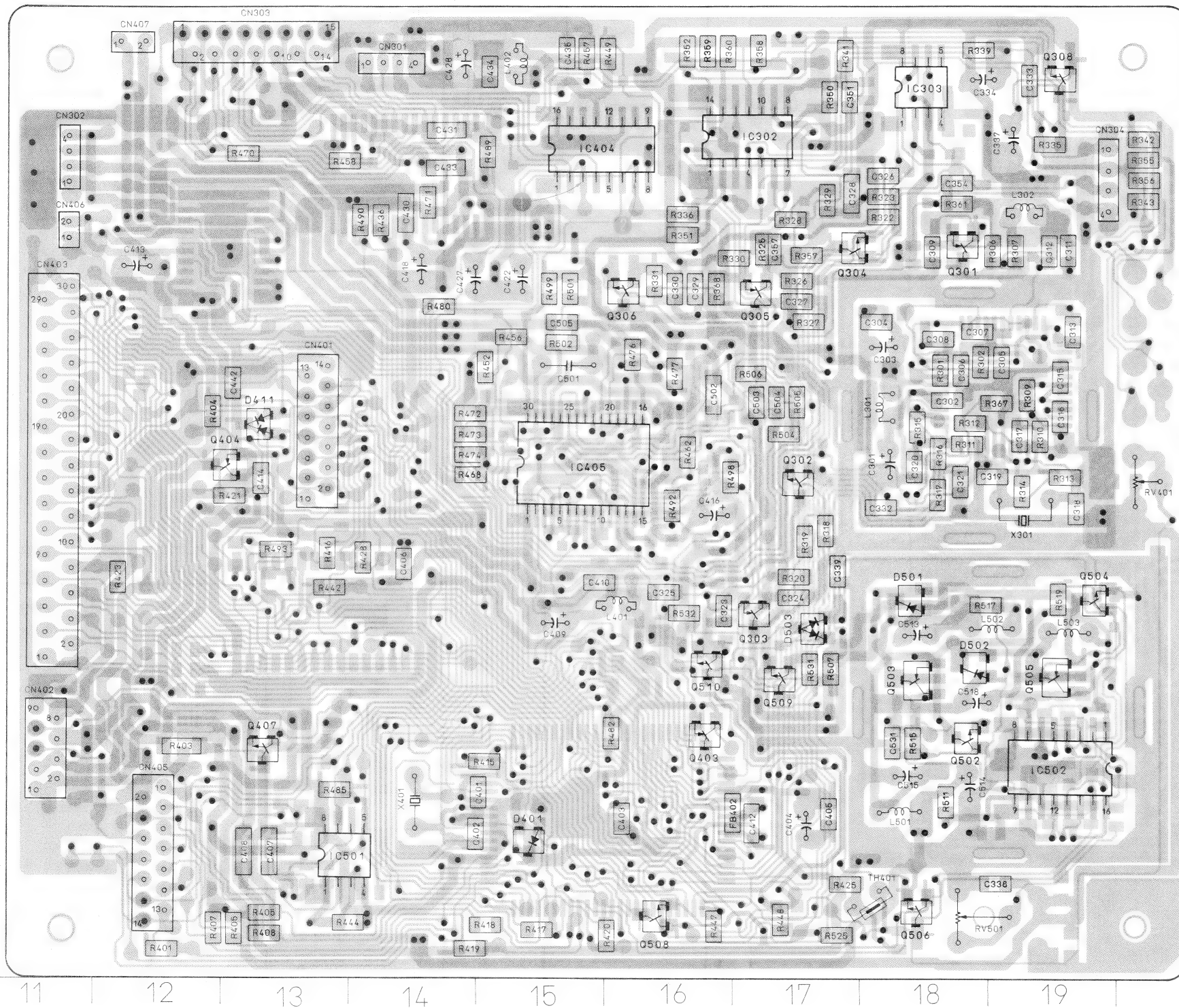


CM-15 BOARD (CONDUCTOR SIDE)

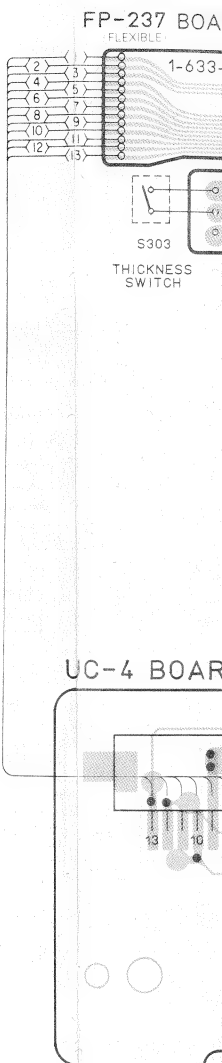
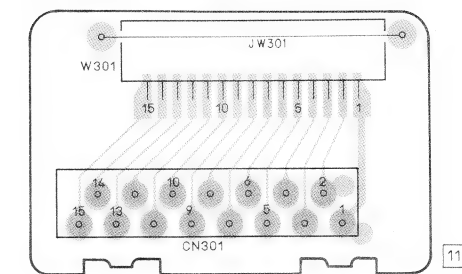




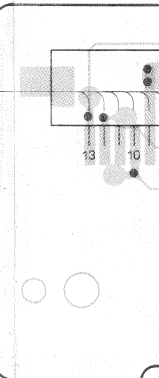
CM-15 BOARD (CONDUCTOR SIDE)



CC-26 BOARD



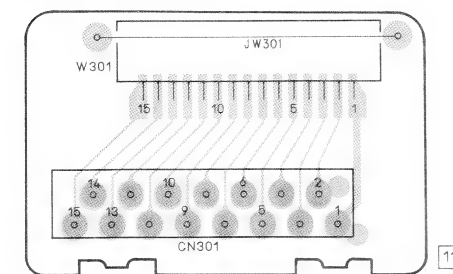
UC-4 BOARD



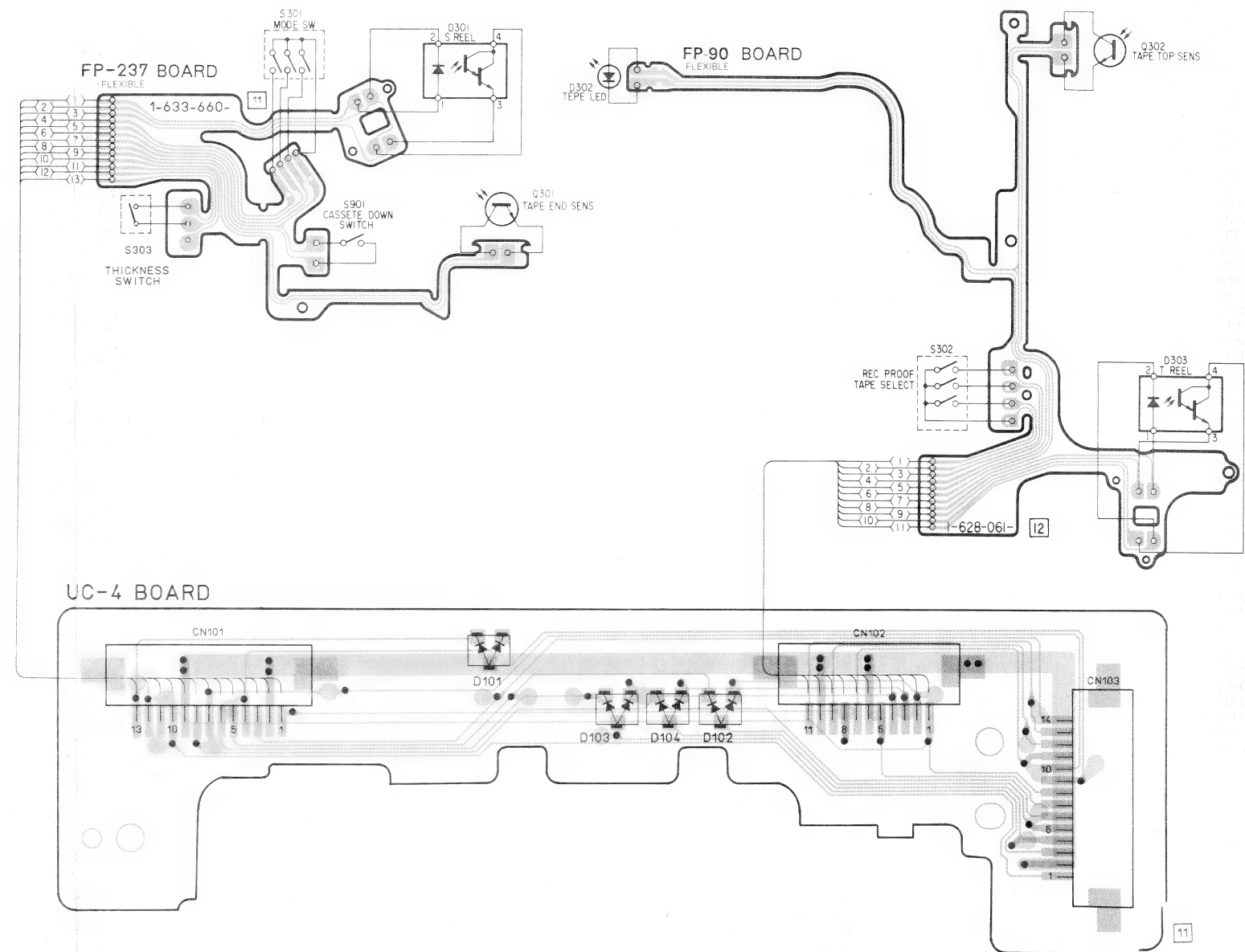




CC-26 BOARD



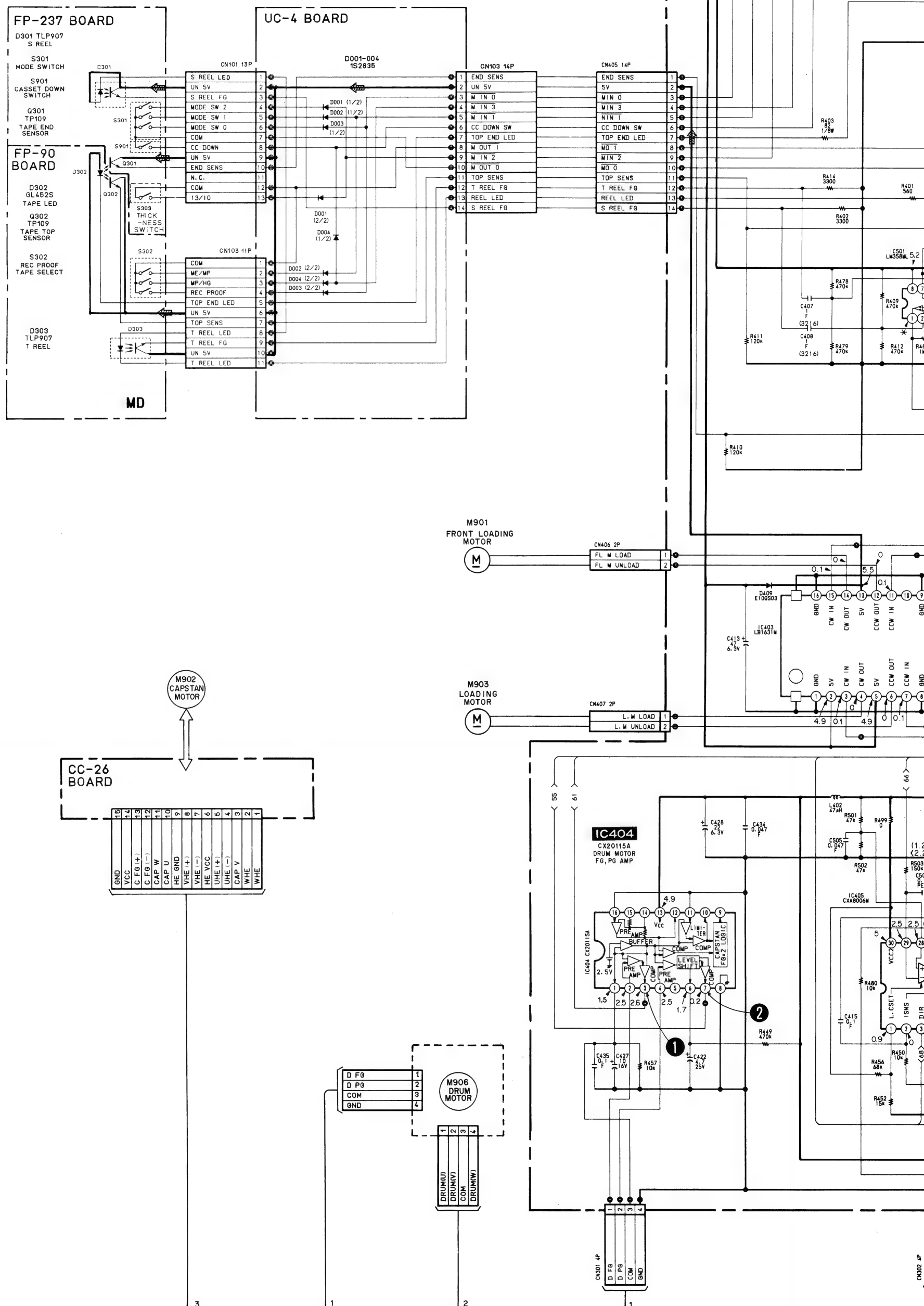
11

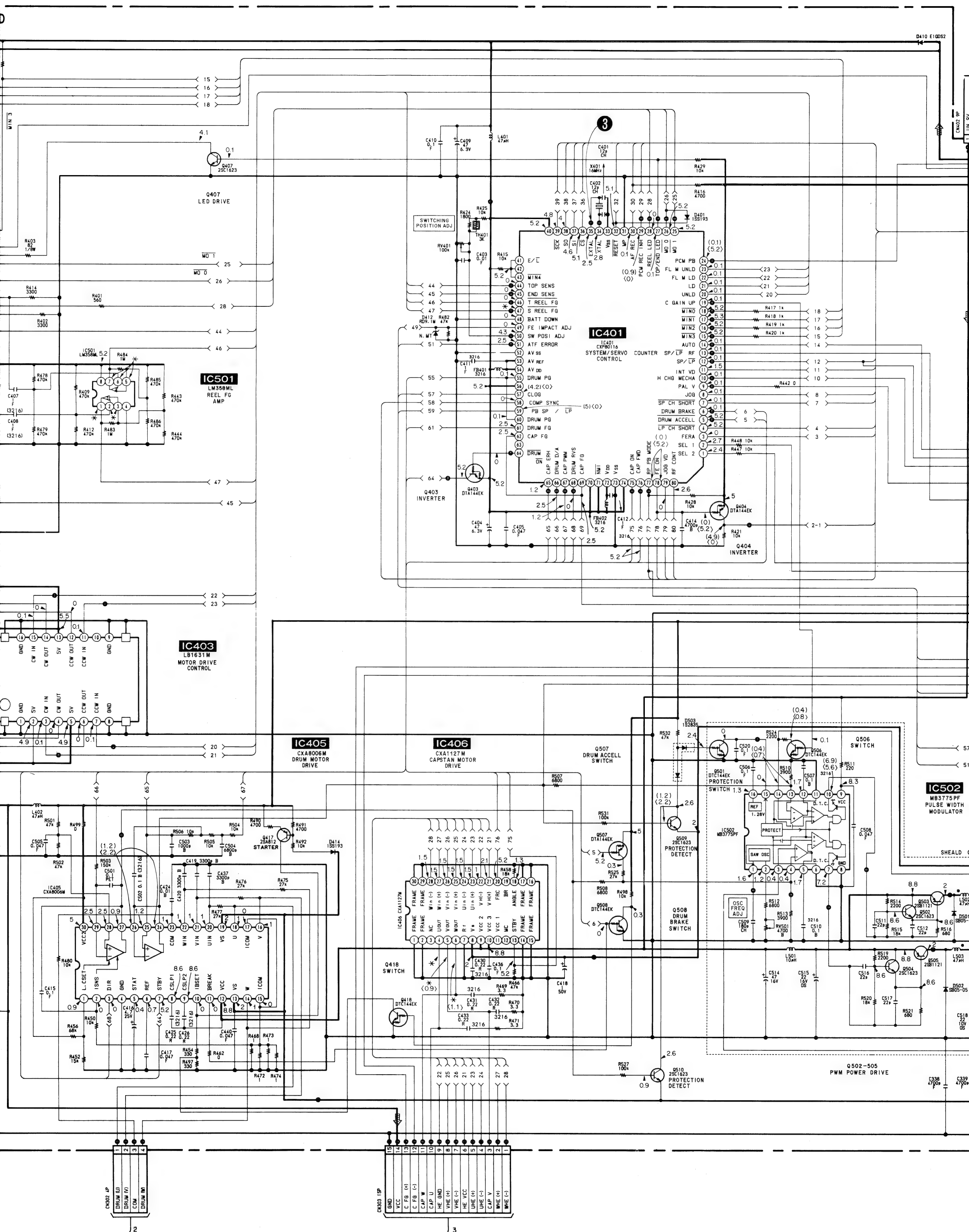


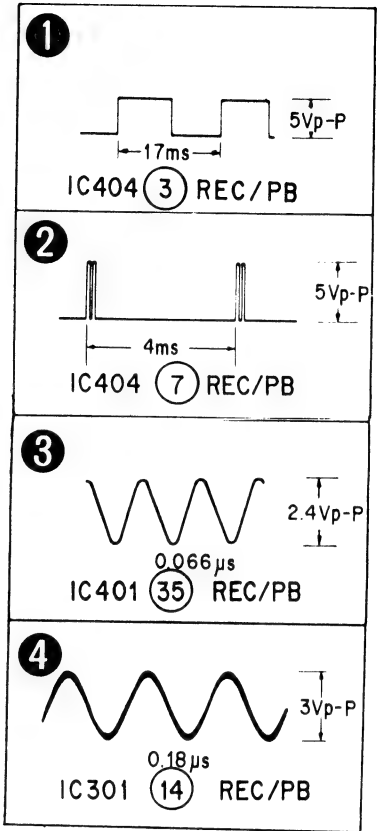
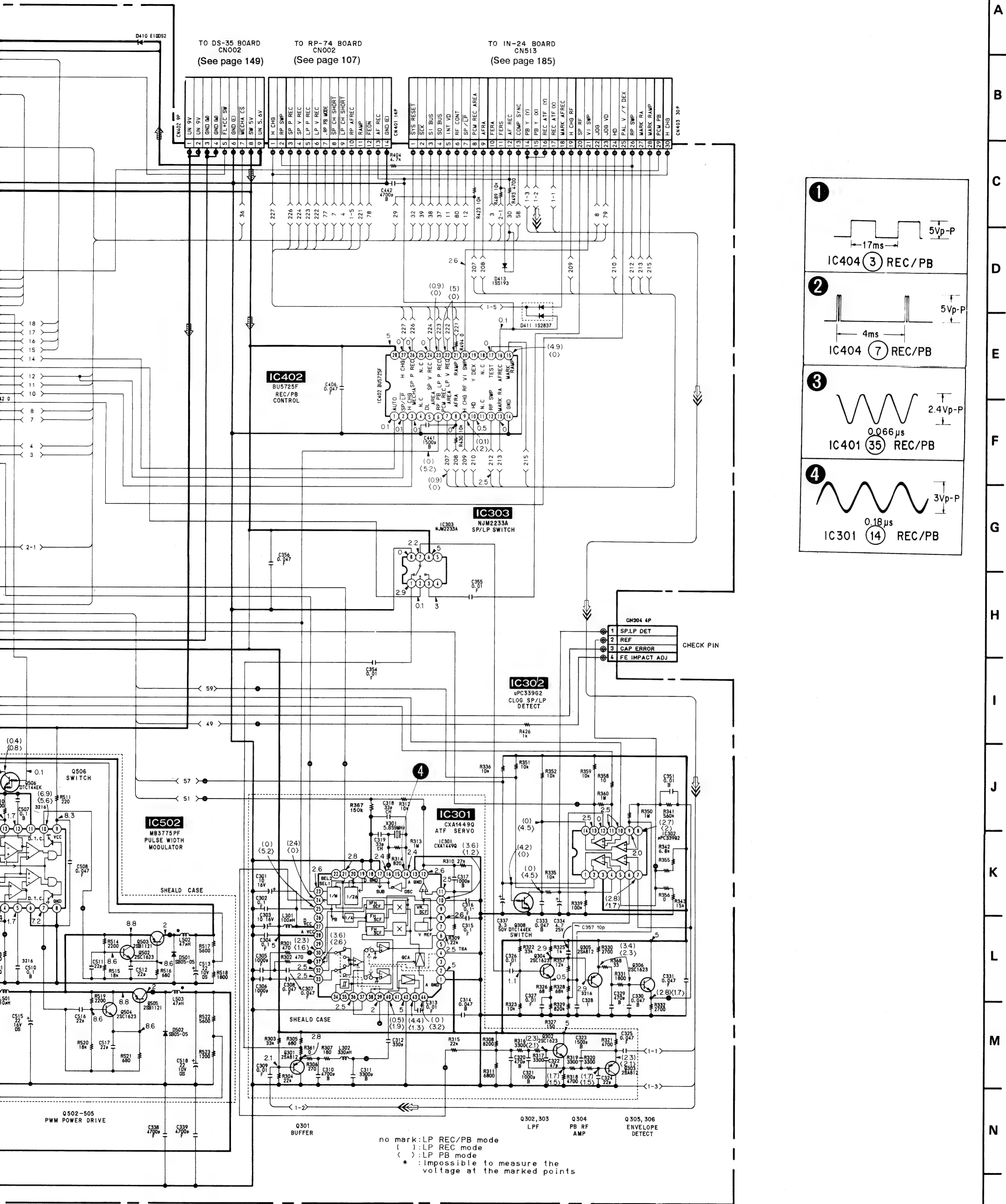
11

# CM-15 (SERVO/SYSTEM CONTROL), UC-4, CC-26 (SIGNAL INTERMEDIATION) SCHEMATIC DIAGRAM

— Ref. No.: CN-15, UC-4, CC-26 Boards; 4,000 series —







	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			
PB			⇒⇒⇒



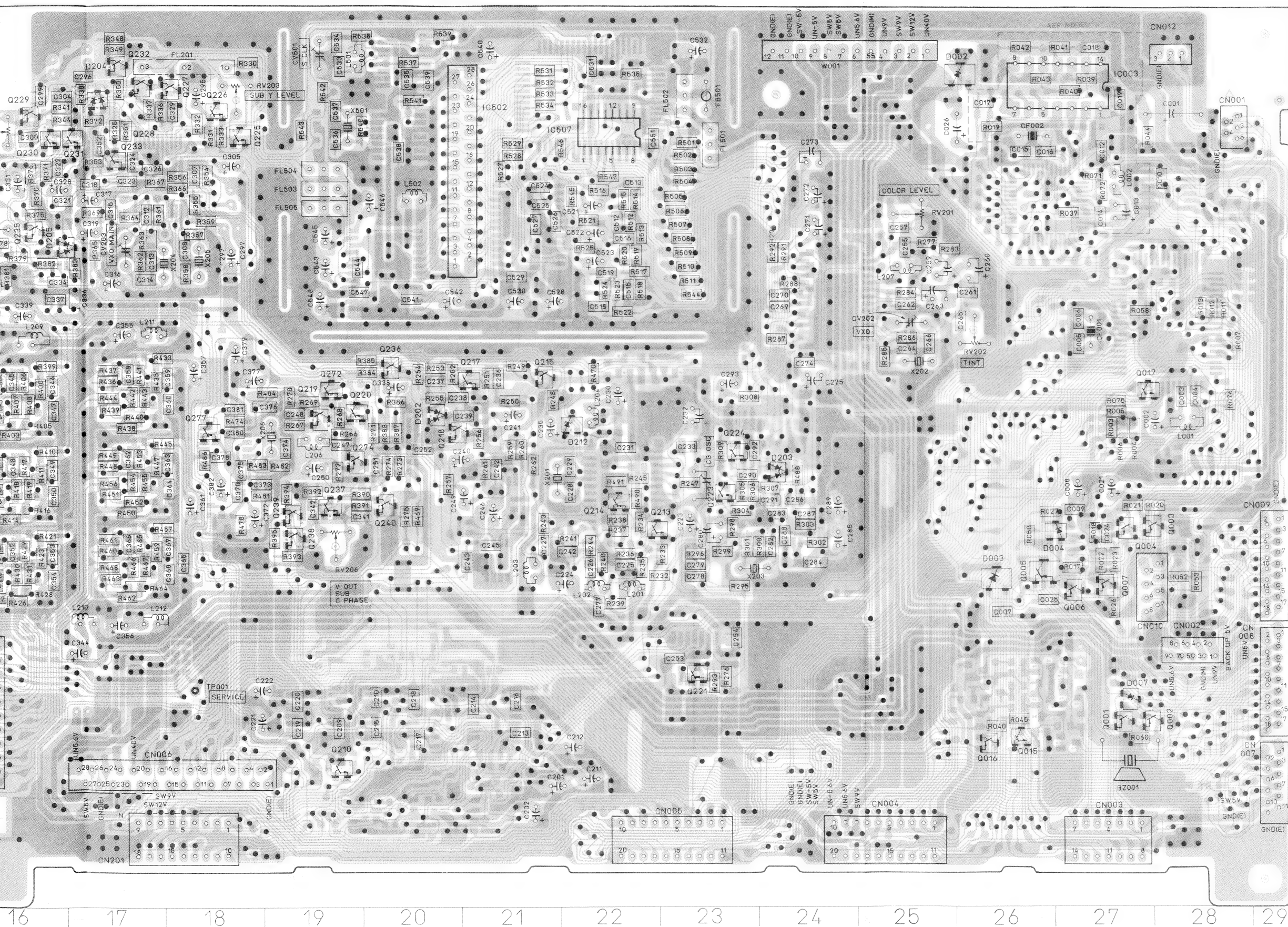
— Ref. No.: DS-35 Board; 5,000 series —







BOARD (CONDUCTOR SIDE)



DS-35 BOARD

D001	B-3	Q213	F-23
D002	A-25	Q214	F-22
	(AEP model)	Q215	D-21
		Q216	G-9
D003	F-26	Q217	D-21
	(AEP model)	Q218	E-20
		Q219	E-19
D004	F-26	Q220	E-19
D007	G-27	Q221	G-23
D201	Q-10	Q222	F-6
D202	E-20	Q223	E-23
D203	E-24	Q224	E-23
D204	A-17	Q225	B-18
D205	C-16	Q226	B-18
D206	E-14	Q227	A-18
D207	E-14	Q228	A-17
D208	F-14	Q229	B-16
D209	E-13	Q230	B-16
D210	E-13	Q231	B-17
D211	F-13	Q232	A-17
D212	E-22	Q233	B-17
		Q234	C-13
IC001	D-2	Q235	C-16
IC002	B-3	Q236	D-20
IC003	A-27	Q237	F-19
IC004	B-2	Q238	F-19
IC005	F-3	Q239	F-19
IC201	G-9	Q240	F-20
IC202	H-10	Q241	G-13
IC203	H-10	Q242	D-13
IC204	F-7	Q243	D-13
IC205	E-8	Q244	D-14
IC206	F-9	Q245	E-13
IC207	E-10	Q246	E-13
IC208	G-6	Q247	E-13
IC209	C-5	Q248	E-13
IC210	E-11	Q249	E-14
IC211	F-6	Q250	E-13
IC212	E-6	Q251	F-13
IC213	B-12	Q252	F-13
IC214	C-14	Q253	F-13
IC215	C-13	Q254	F-14
IC501	A-8	Q255	F-13
IC502	B-21	Q256	F-13
IC503	C-8	Q257	D-12
IC504	C-10	Q258	D-12
IC505	A-10	Q259	D-13
IC506	B-10	Q260	E-12
IC507	B-22	Q261	E-12
		Q262	E-12
O001	H-27	Q263	E-12
O002	H-28	Q264	E-13
O003	F-28	Q265	E-12
O004	F-27	Q266	F-12
O005	F-26	Q267	F-12
O006	F-27	Q268	F-12
O007	F-27	Q269	F-12
O015	H-26	Q270	F-12
O016	H-26	Q271	F-12
O017	D-27	Q272	D-19
Q201	I-9	Q273	E-7
Q202	I-9	Q274	E-19
Q203	I-10	Q275	B-13
Q207	G-9	Q276	F-11
Q208	H-9	Q277	E-18
Q209	H-9	Q278	G-10
Q210	H-19	Q501	B-7
Q211	H-10	Q502	C-7
Q212	H-10	Q503	C-7



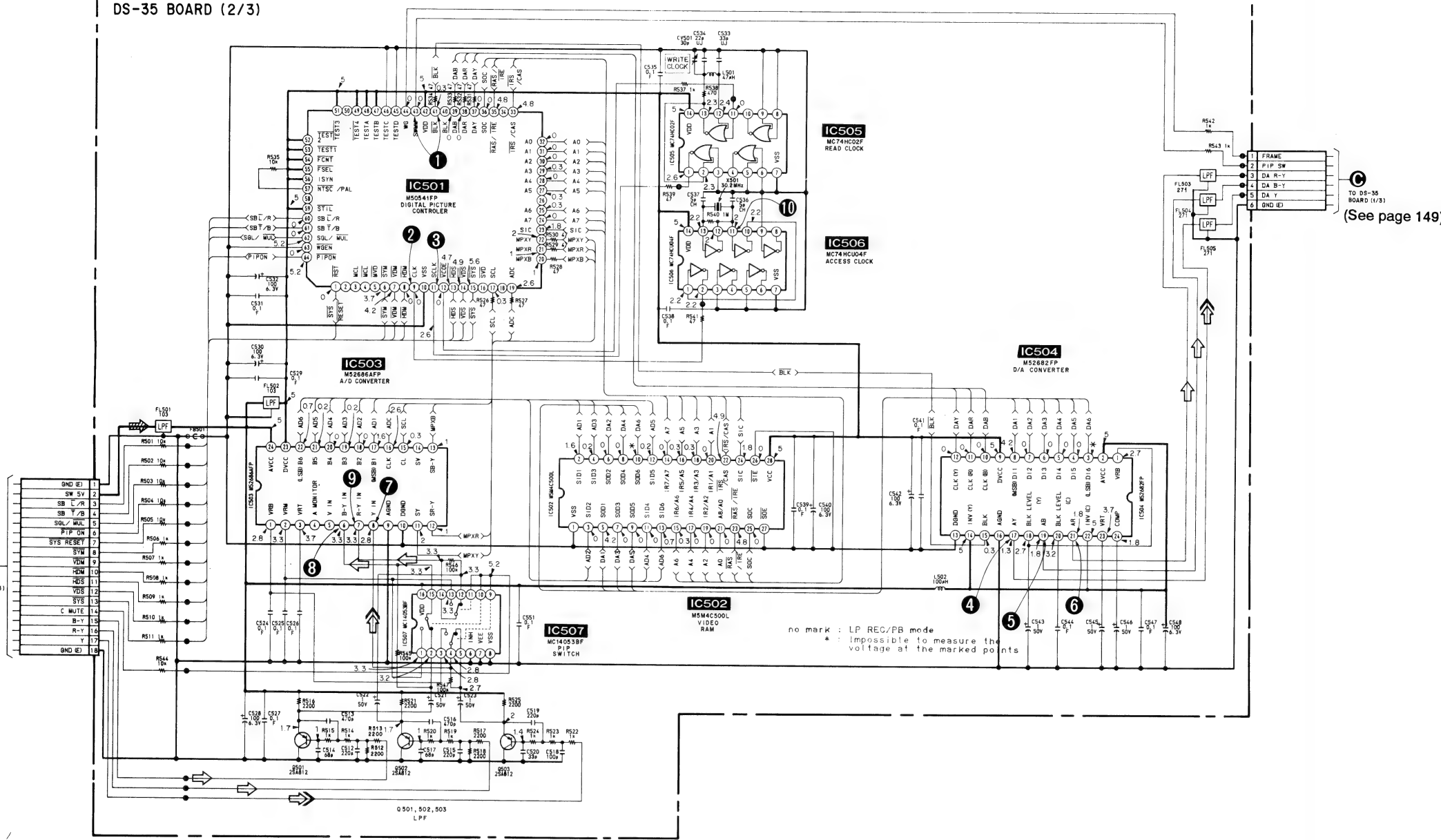




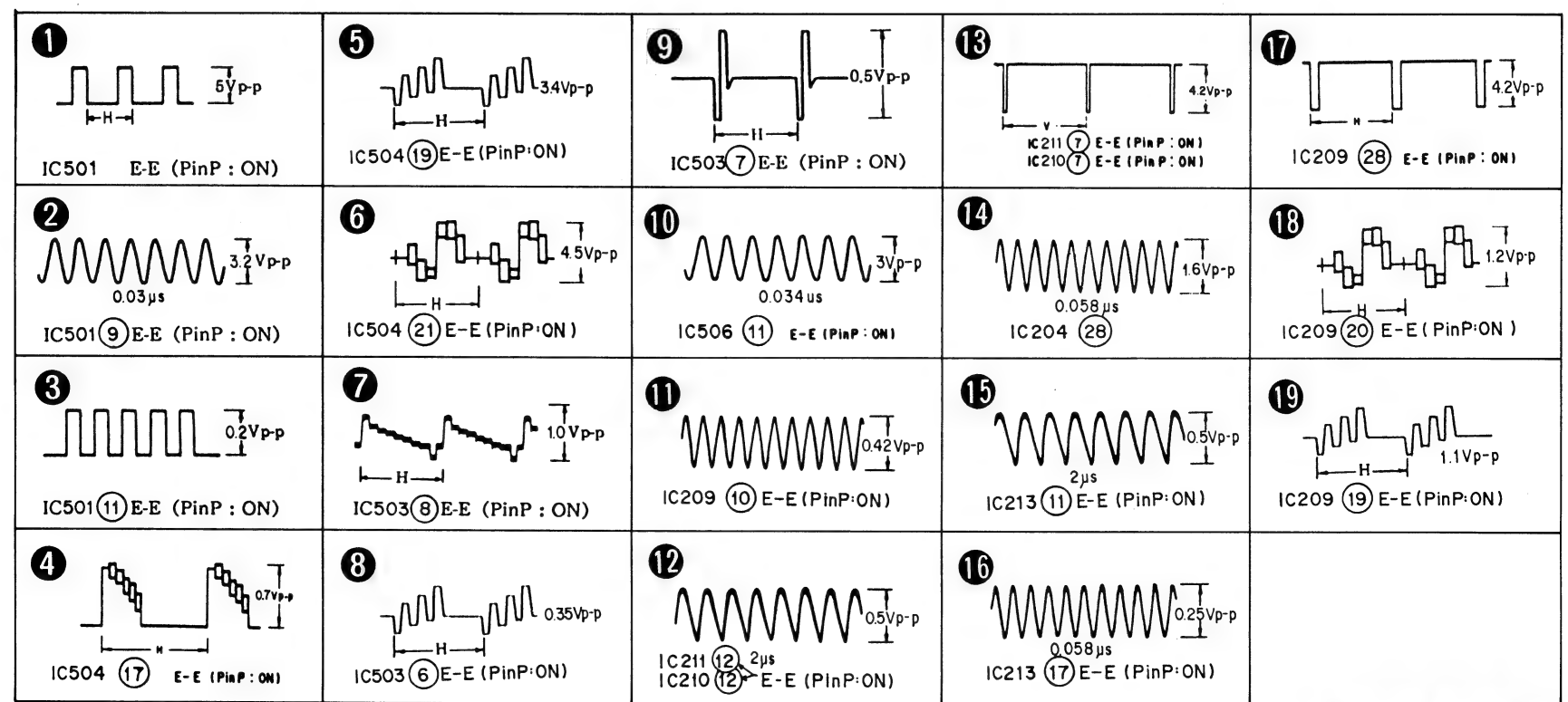


A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

DS-35 BOARD (2/3)

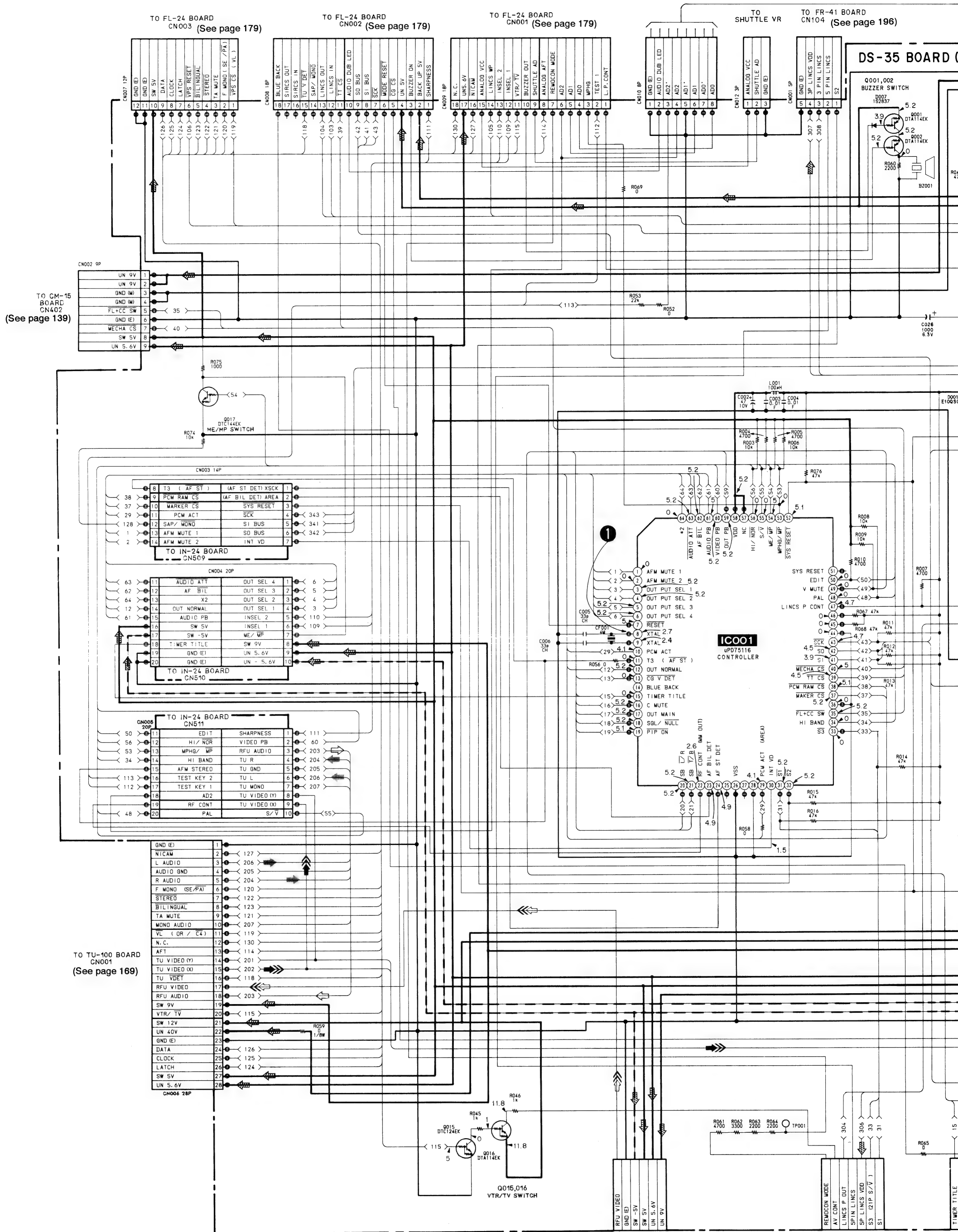


	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	
PB	➡	➡➡	➡➡➡

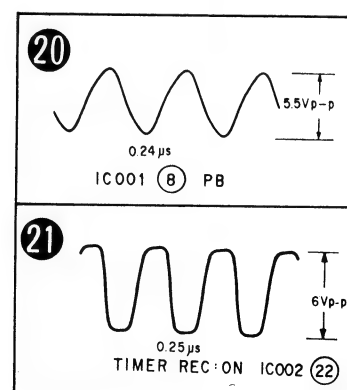
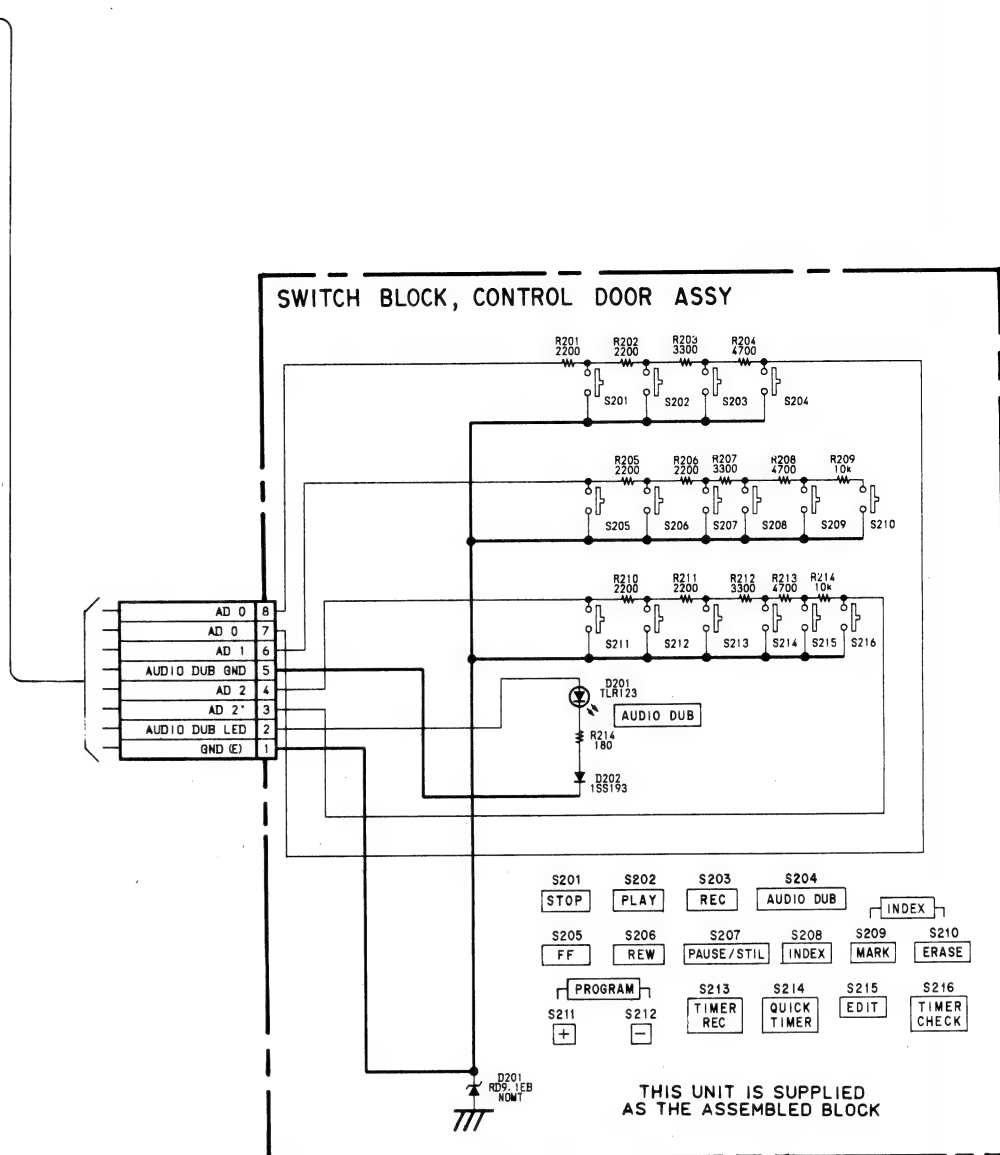


# DS-35 (DIGITAL SIGNAL PROCESS) SCHEMATIC DIAGRAMS (3/3)

- Ref. No.: DS-35 Board; 5,000 series -







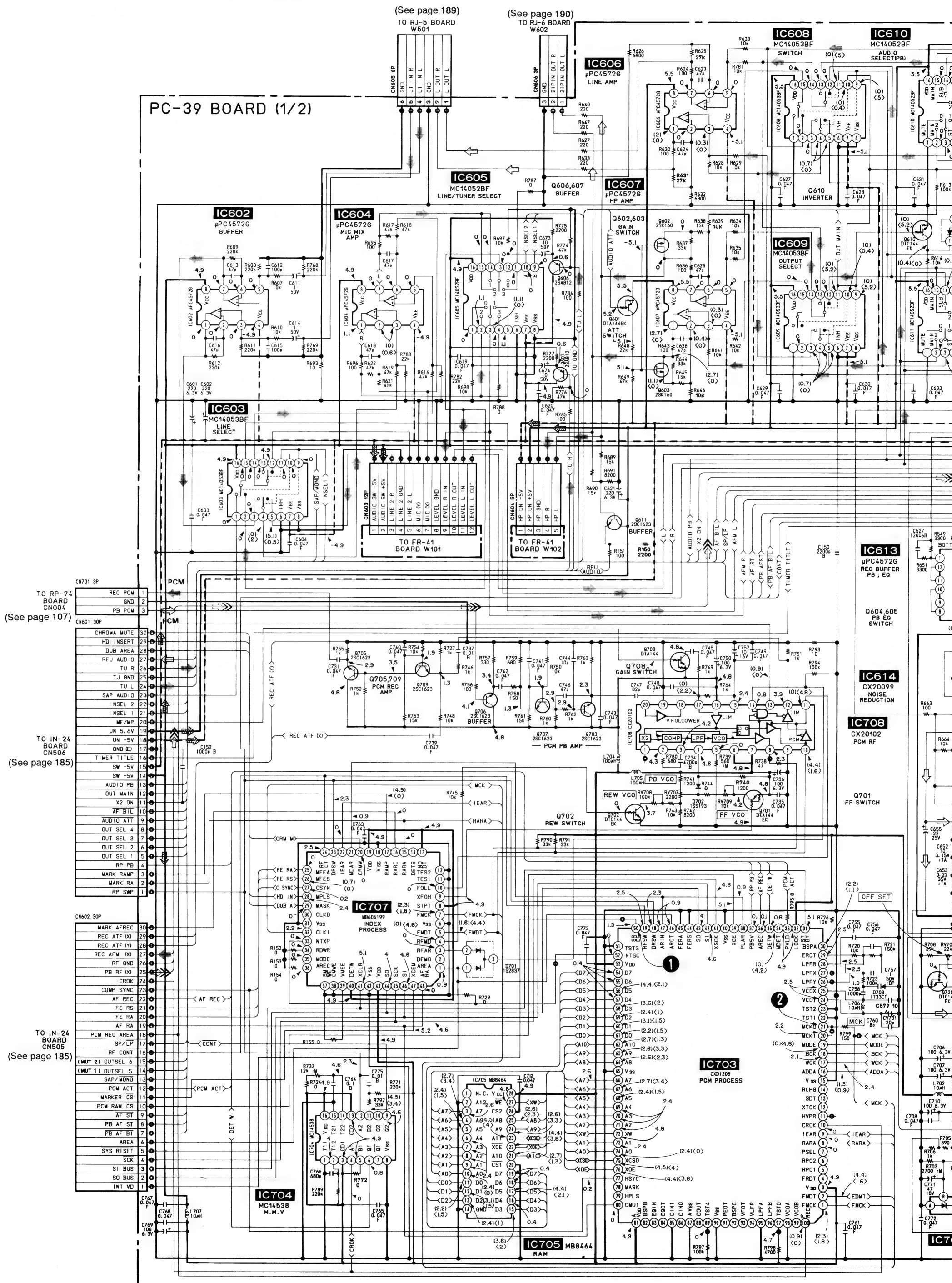
	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC			➡➡➡	➡
PB			➡➡➡	➡



# PC-39 (AUDIO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/2)

— Ref. No.: PC-39 Board; 6,000 series —

## PC-39 BOARD (1/2)



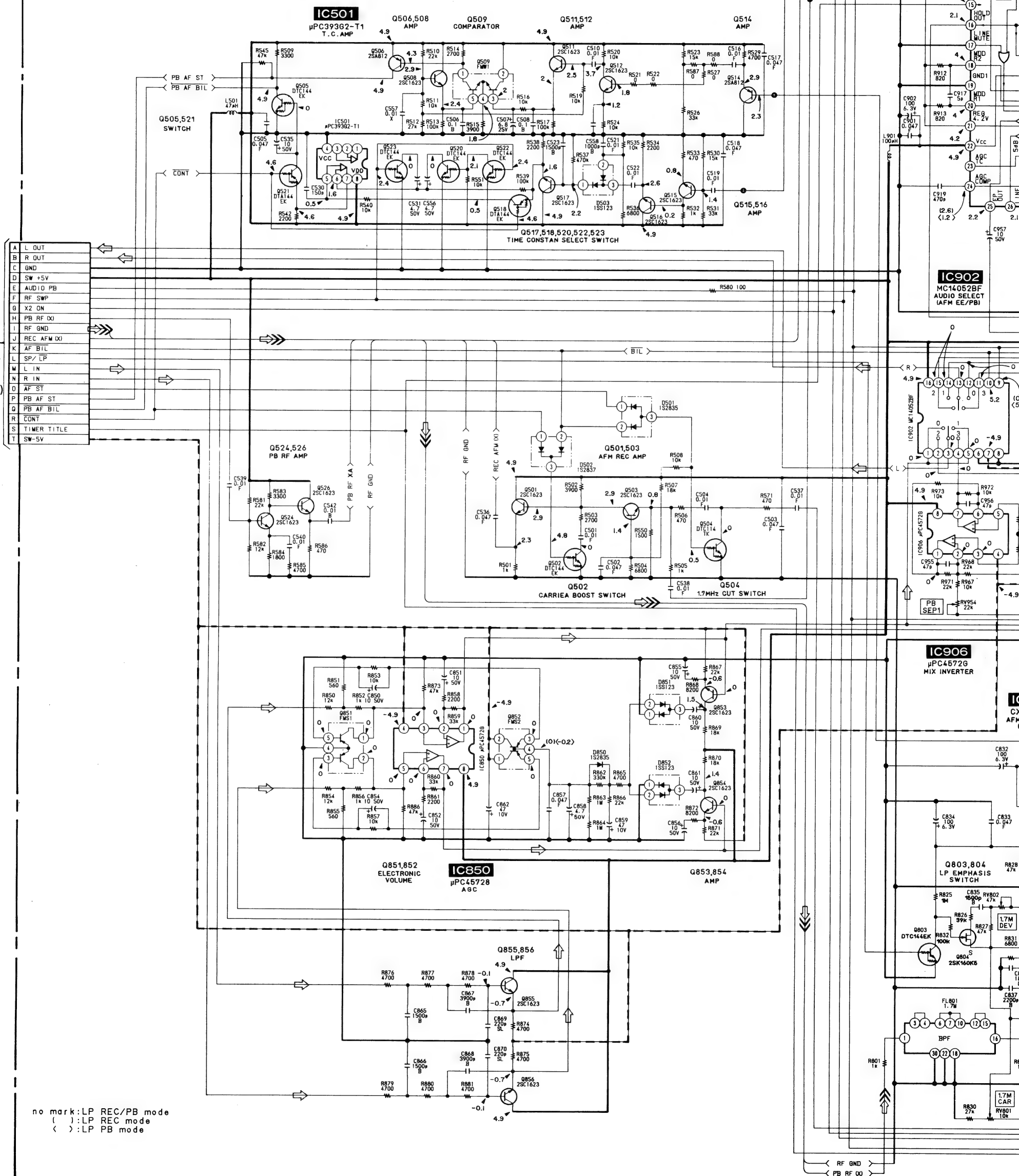


	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC				➡
PB			➡➡➡	➡

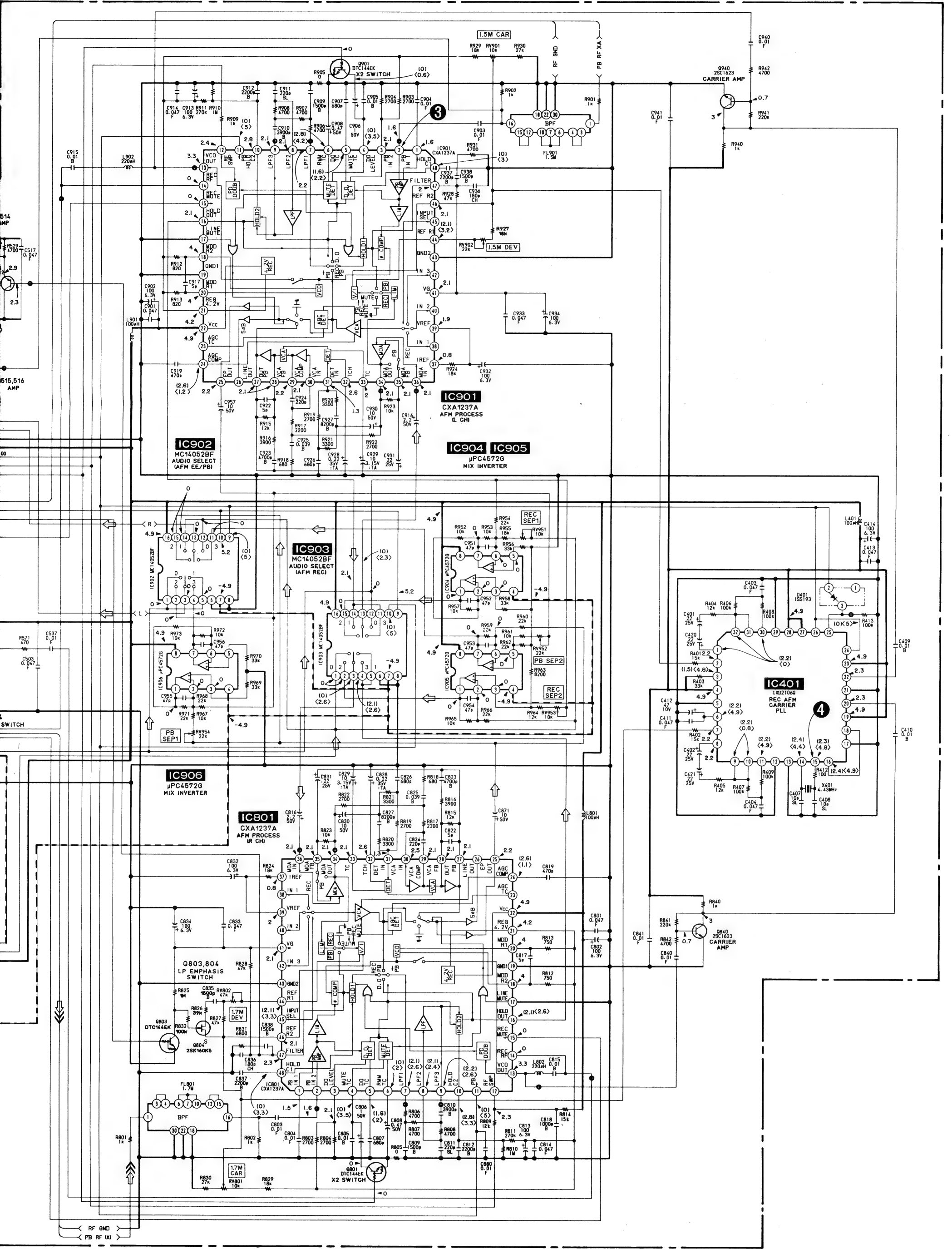
# PC-39 (AUDIO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (2/2)

— Ref. No.: PC-39 Board; 6,000 series —

## PC-39 BOARD (2/2)







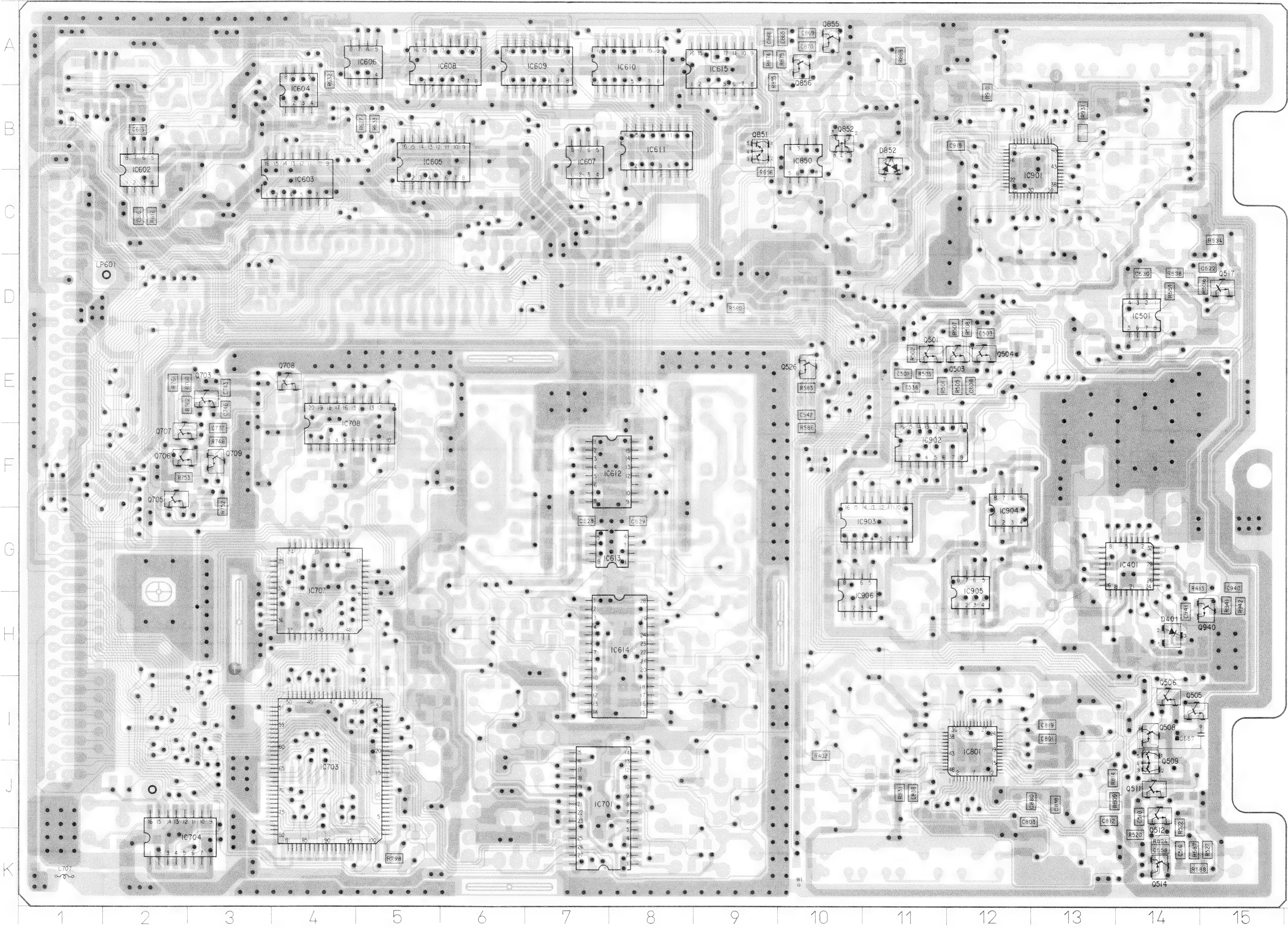
	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC				
PB			➡➡➡	➡



PC-39 BOARD

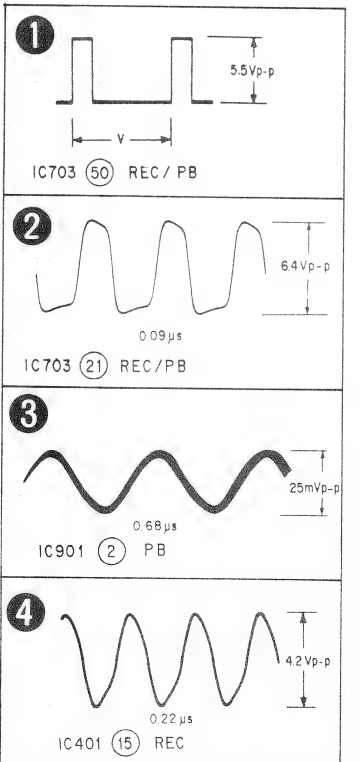
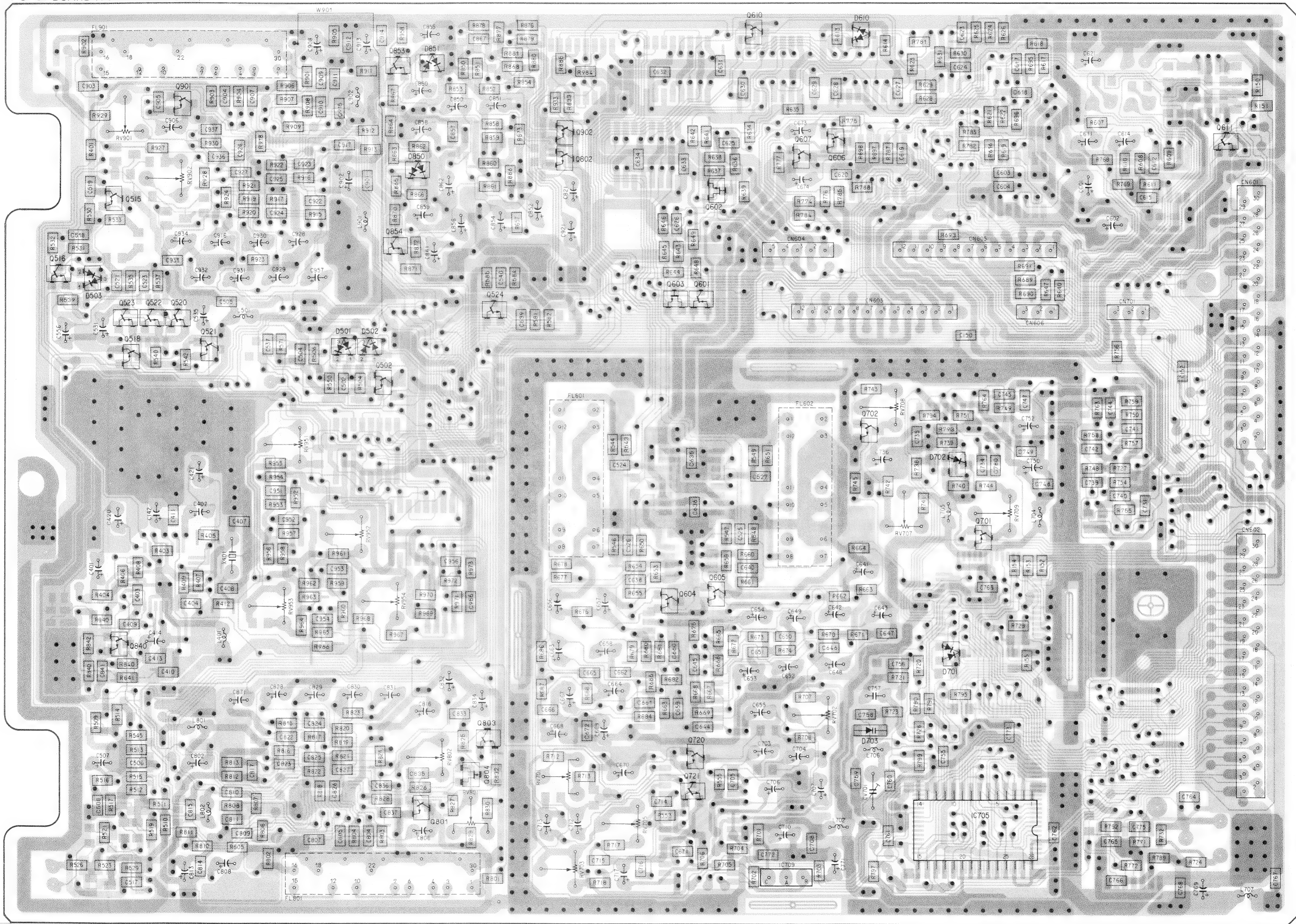
D401	H-14	Q506	I-14
D501	D-20	Q508	I-14
D502	D-21	Q509	J-14
D503	D-18	Q511	J-14
D610	A-26	Q512	K-14
D701	H-27	Q514	K-14
D702	F-28	Q515	C-18
D703	I-27	Q516	D-17
D850	B-21	Q517	D-15
D851	A-21	Q518	E-18
D852	B-11	Q520	D-18
		Q521	D-19
IC401	G-14	Q522	D-18
IC501	D-14	Q523	D-18
IC602	C-2	Q524	D-22
IC603	C-4	Q526	E-10
IC604	B-4	Q601	D-25
IC605	B-5	Q602	C-25
IC606	A-5	Q603	D-24
IC607	B-7	Q604	G-24
IC608	A-6	Q605	G-25
IC609	A-7	Q606	B-26
IC610	A-8	Q607	B-26
IC611	B-8	Q610	A-25
IC612	F-8	Q611	B-31
IC613	G-8	Q701	G-28
IC614	H-8	Q702	E-27
IC615	A-9	Q703	E-3
IC701	J-7	Q705	F-2
IC703	J-4	Q706	F-2
IC704	J-2	Q707	F-2
IC705	J-28	Q708	I-25
IC707	G-4	Q709	E-3
IC708	F-4	Q720	I-25
IC709	K-26	Q721	J-24
IC801	I-12	Q801	J-21
IC850	B-10	Q802	B-23
IC901	C-13	Q840	H-18
IC902	F-11	Q851	B-9
IC903	G-11	Q852	B-10
IC904	G-12	Q853	A-21
IC905	H-12	Q854	C-21
IC906	H-10	Q855	A-10
		Q856	A-10
Q501	E-11	Q901	B-19
Q502	E-21	Q902	B-23
Q503	E-12	Q940	H-15
Q504	E-12		
Q505	I-14		

PC-39 BOARD (COMPONENT SIDE)





PC-39 BOARD (CONDUCTOR SIDE)





– Ref. No.: TU-100 Board; 7,000 series –

**A**

E

Q

□

E

**F**

C

1

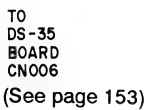
1

•

TO NM-  
BOARD  
CN001  
(See page 17)

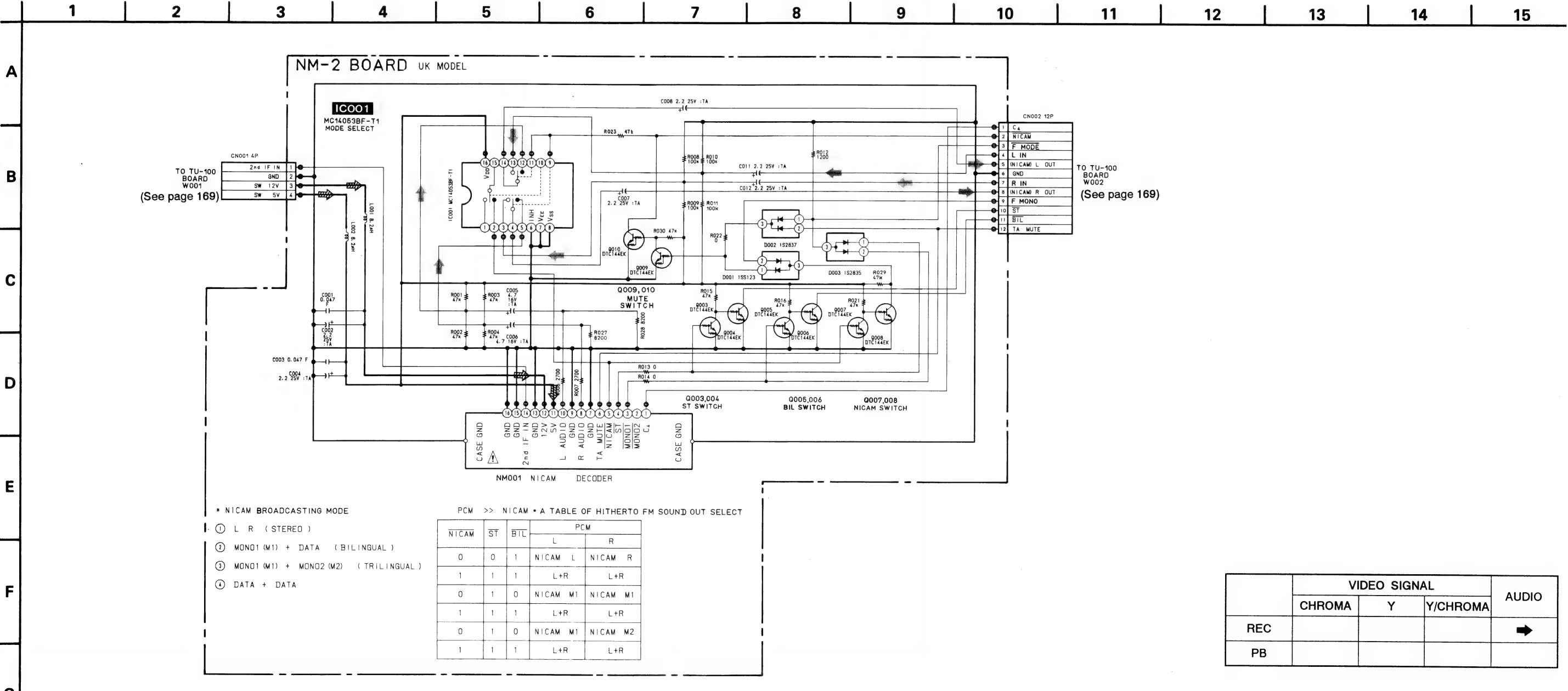
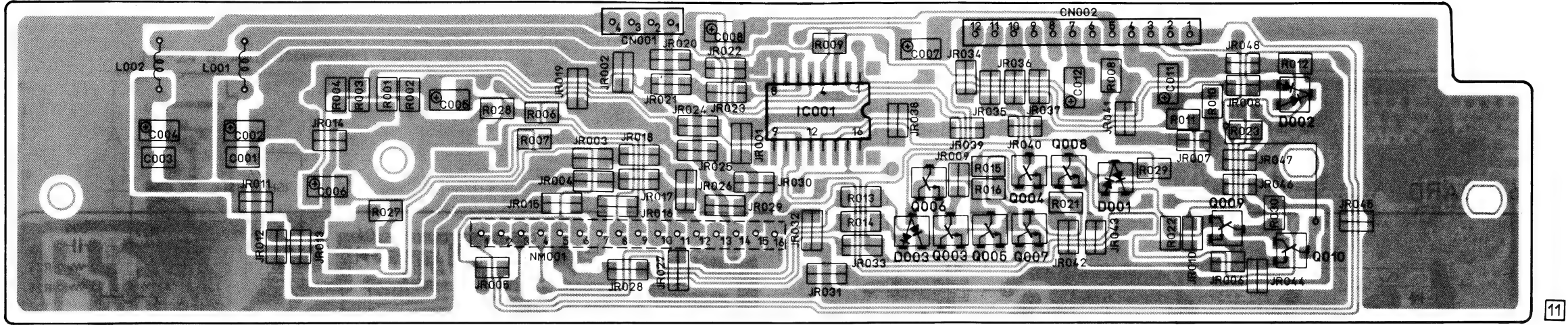
	*
	R
	C
	C
	C
	L
	R
	R
	R
	R

— Ref. No.: TU-100 Board; 7,000 series —

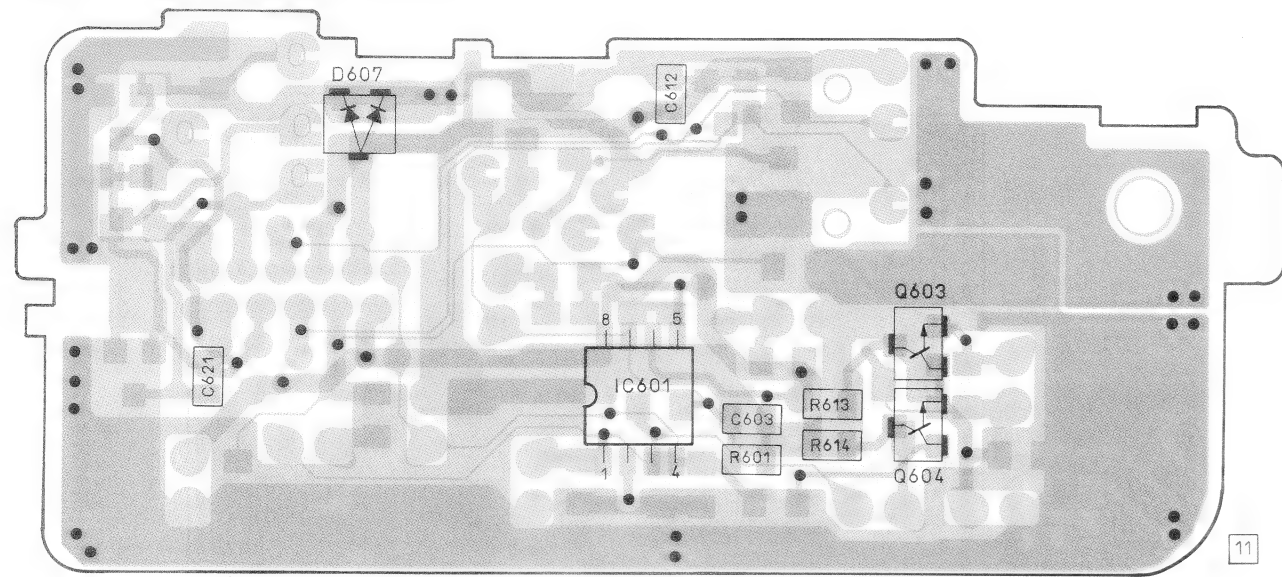




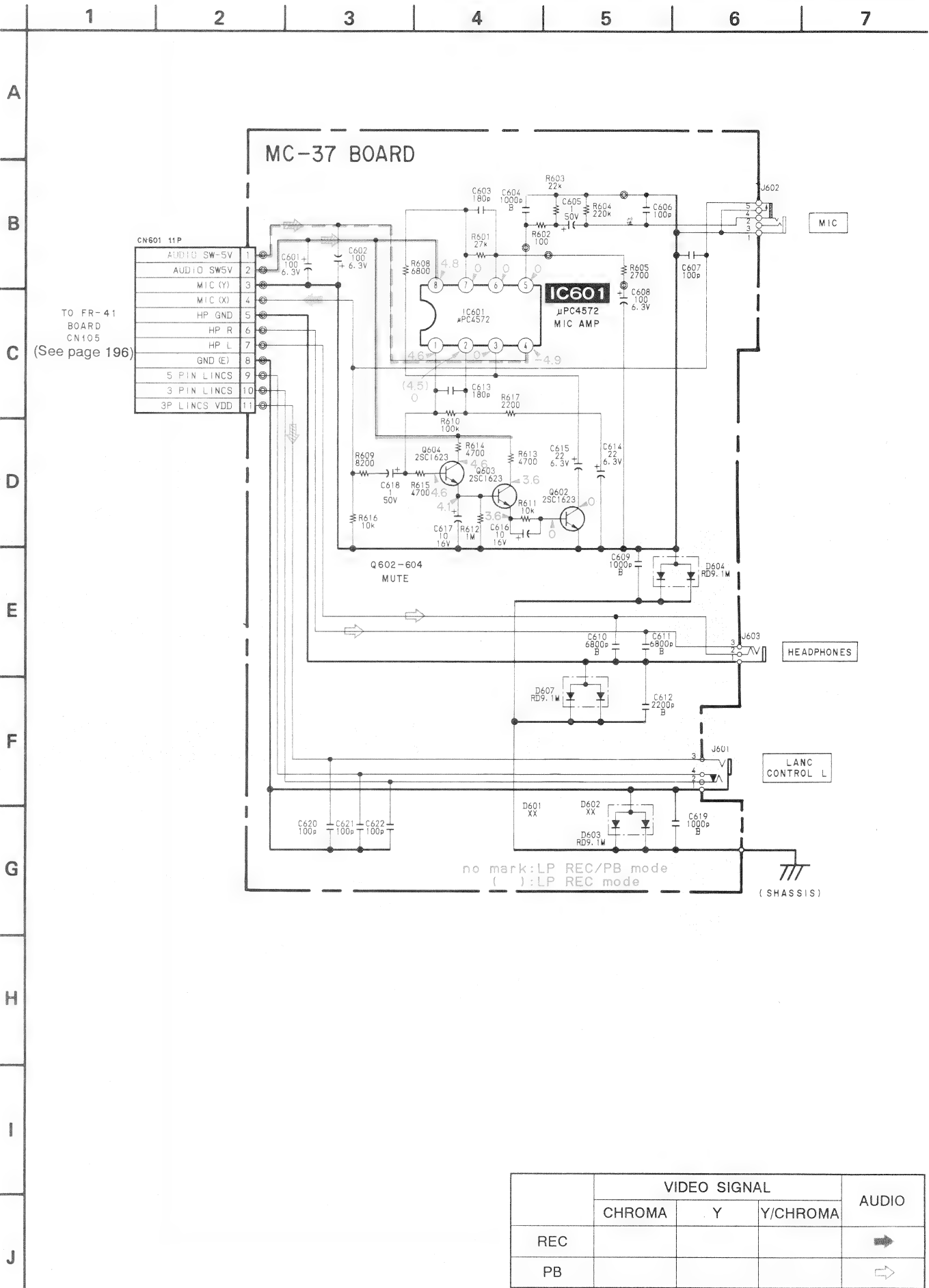
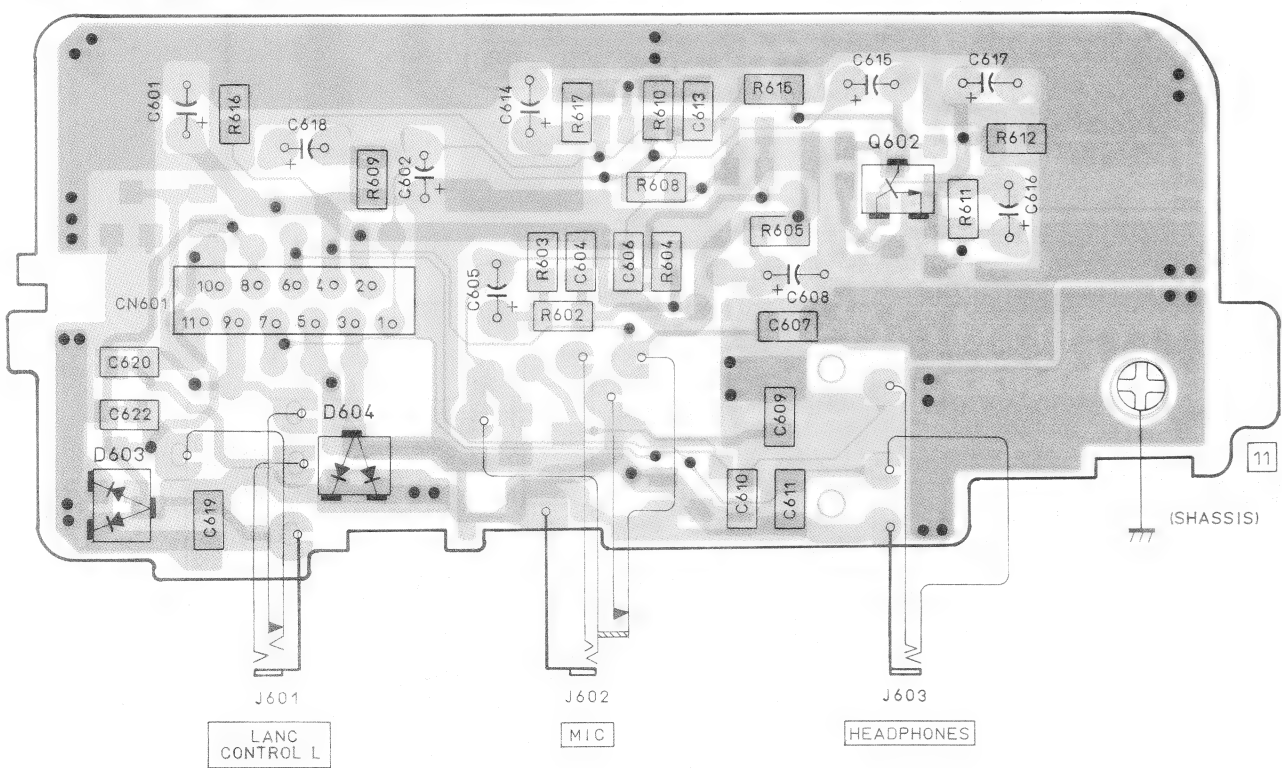
NM-2 BOARD UK MODEL



MC-37 BOARD (COMPONENT SIDE)



MC-37 BOARD (CONDUCTOR SIDE)





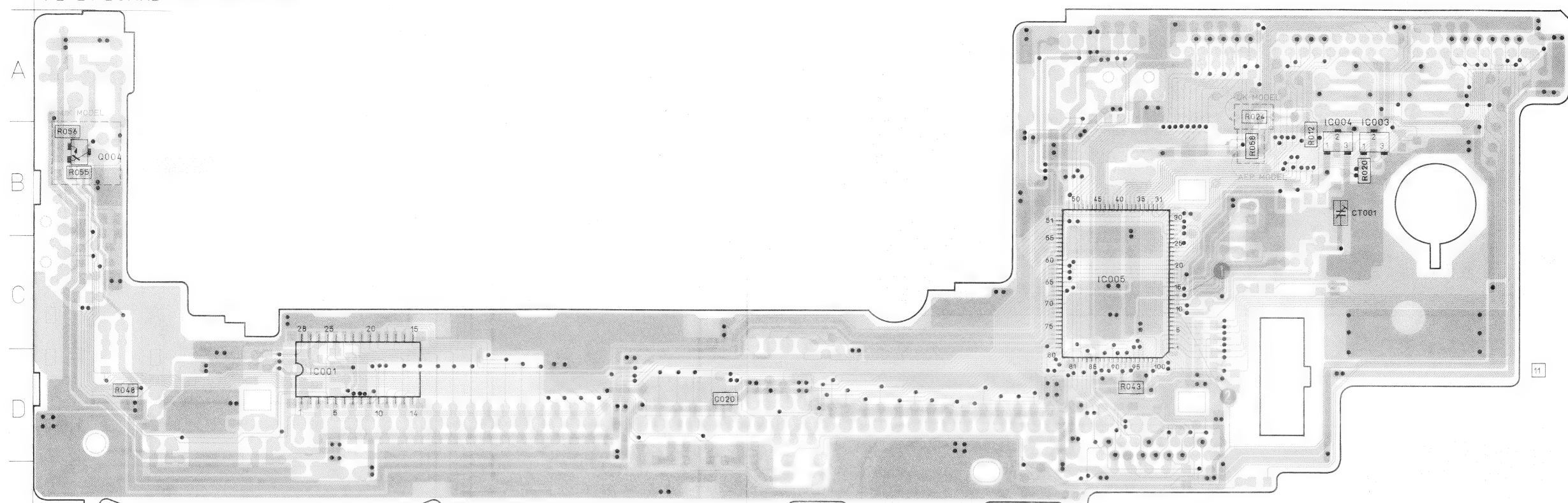
## FL-24 (FLUORESCENT DISPLAY) PRINTED WIRING BOARD

— Ref. No.: FL-24 Board; 11,000 series —

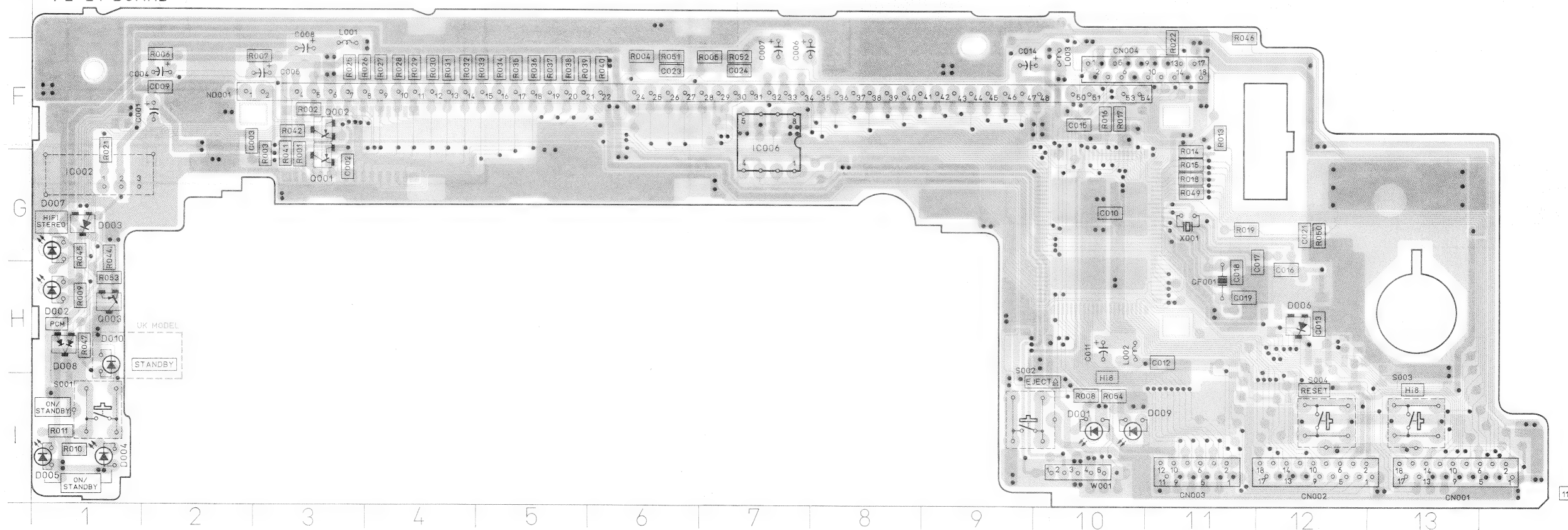
## PS-198

— Ref.

FL-24 BOARD (COMPONENT SIDE)



FL-24 BOARD (CONDUCTOR SIDE)



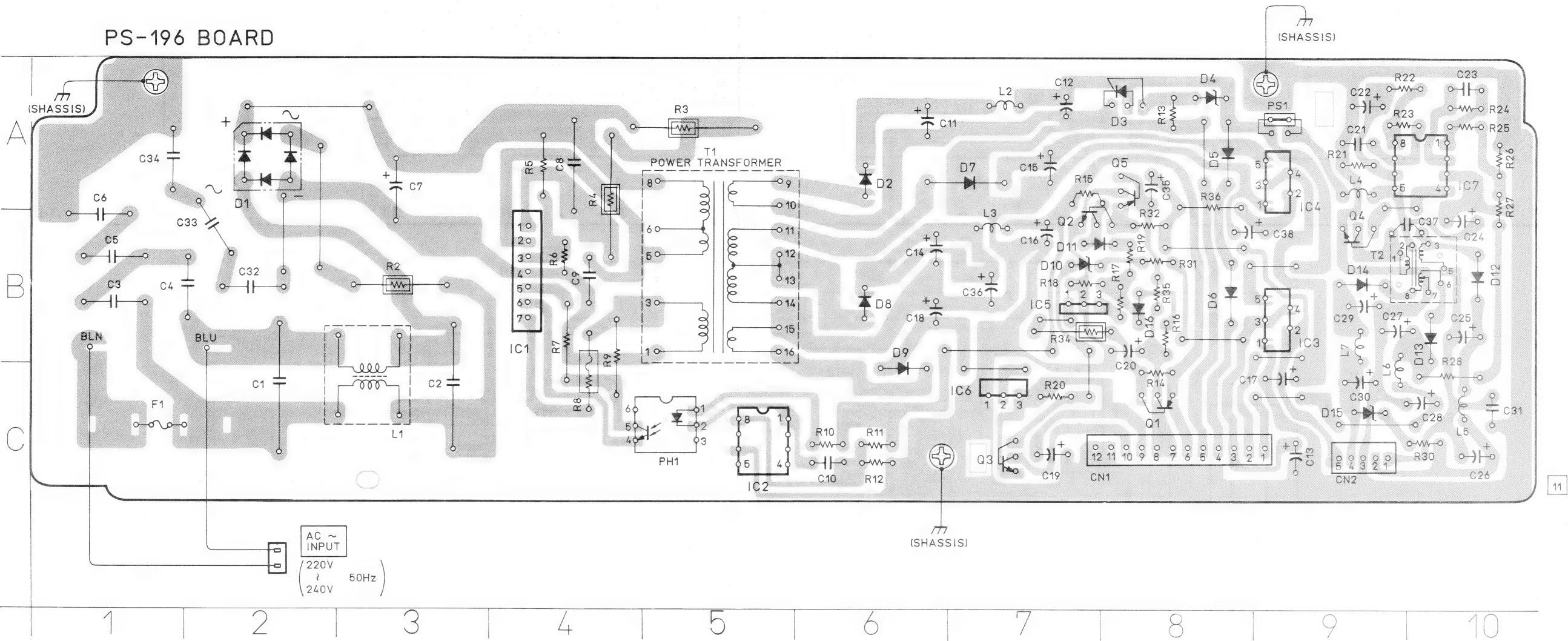
PS-196 BOARD

D1	A-2
D2	A-6
D3	A-8
D4	A-8
D5	A-8
D6	B-8
D7	A-7
D8	B-6
D9	B-9
D10	B-7
D11	B-7
D12	B-10
D13	B-10
D14	B-9
D15	C-9
D16	B-8
IC1	B-4
IC2	C-5
IC3	B-9
IC4	A-9
IC5	B-7
IC6	C-7
IC7	A-10
PH1	C-5
Q1	C-8
Q2	A-7
Q3	C-7
Q4	B-9
Q5	A-8

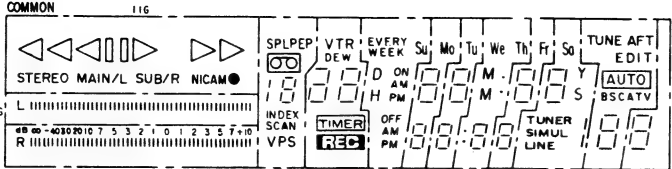
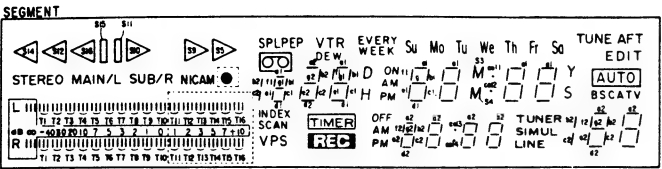
PS-196 (POWER SUPPLY) PRINTED WIRING BOARD  
- Ref. No.: PS-196 Board; 12,000 series -

PS-196 BOARD

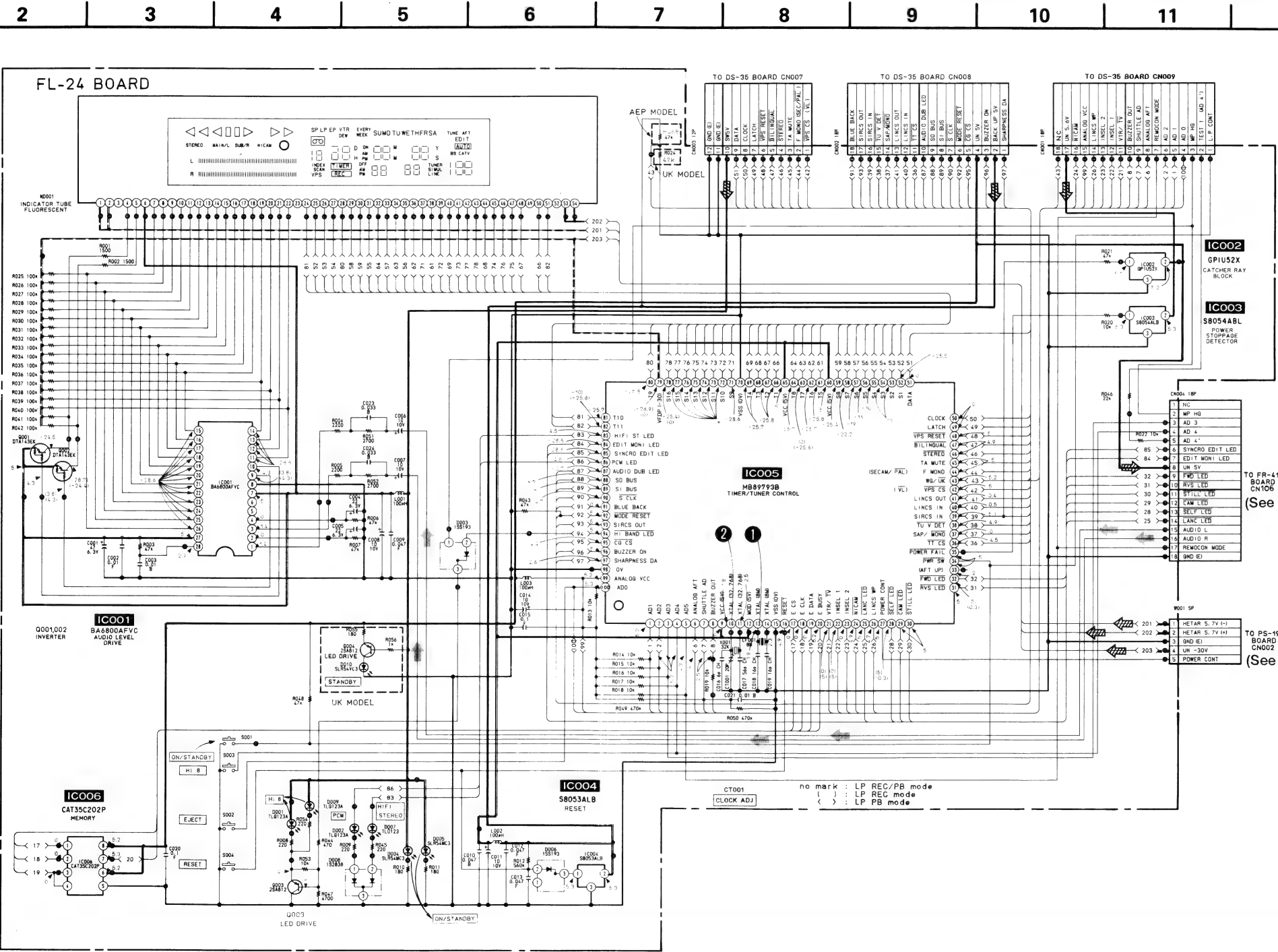
- |     |      |
|-----|------|
| D1  | A-2  |
| D2  | A-6  |
| D3  | A-8  |
| D4  | A-8  |
| D5  | A-8  |
| D6  | B-8  |
| D7  | A-7  |
| D8  | B-6  |
| D9  | B-9  |
| D10 | B-7  |
| D11 | B-7  |
| D12 | B-10 |
| D13 | B-10 |
| D14 | B-9  |
| D15 | C-9  |
| D16 | B-8  |
| IC1 | B-4  |
| IC2 | C-5  |
| IC3 | B-9  |
| IC4 | A-9  |
| IC5 | B-7  |
| IC6 | C-7  |
| IC7 | A-10 |
| PH1 | C-5  |
| Q1  | C-8  |
| Q2  | A-7  |
| Q3  | C-7  |
| Q4  | B-9  |
| Q5  | A-8  |







	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	STEREO	EP	VTR	EVERY WEEK	Mo	Tu	We	Fr	Sa	TUNE	
S2	MAIN	a1	a1	Su	a1	a1	Th	a1	a1	AFT	
S3	L	b1	b1	D	b1	b1	M Up	b1	b1	EDIT	
S4	NICAM	c1	c1	H	c1	c1	M Down	c1	c1	CATV	
S5	▷ R	d1	d1		d1	d1	• col4	d1	d1		
S6	●	e1	e1	PM	e1	e1	• col3	e1	e1	AUTO	
S7	SUB	f1	f1	ON	f1	f1	• col1	f1	f1		
S8	R	g1	g1	AM	g1	g1	• col2	g1	g1		
S9	▷ M								Y	BS	
S10	▷ L	g2			a2	a2	a2	a2	S	a2	a2
S11	□ R	SP	b2		b2	b2	b2	b2	b1,c2	b2	b2
S12	△ M	VPS	c2	OFF	c2	c2	c2	c2	TUNER	c2	c2
S13		LP	DEW	PM	d2	d2	d2	d2	LINE	d2	d2
S14	△ L	b2,c2	e2	AM	e2	e2	e2	e2	SIMUL	e2	e2
S15	□ L	INDEX	TIMER		f2	f2	f2	f2		f2	f2
S16	△ R	SCAN	REC		g2	g2	g2	g2		g2	g2

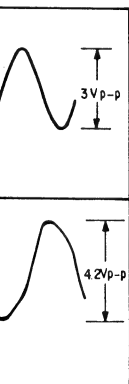


PS-196 (POWER SUPPLY) SCHEMATIC DIAGRAM

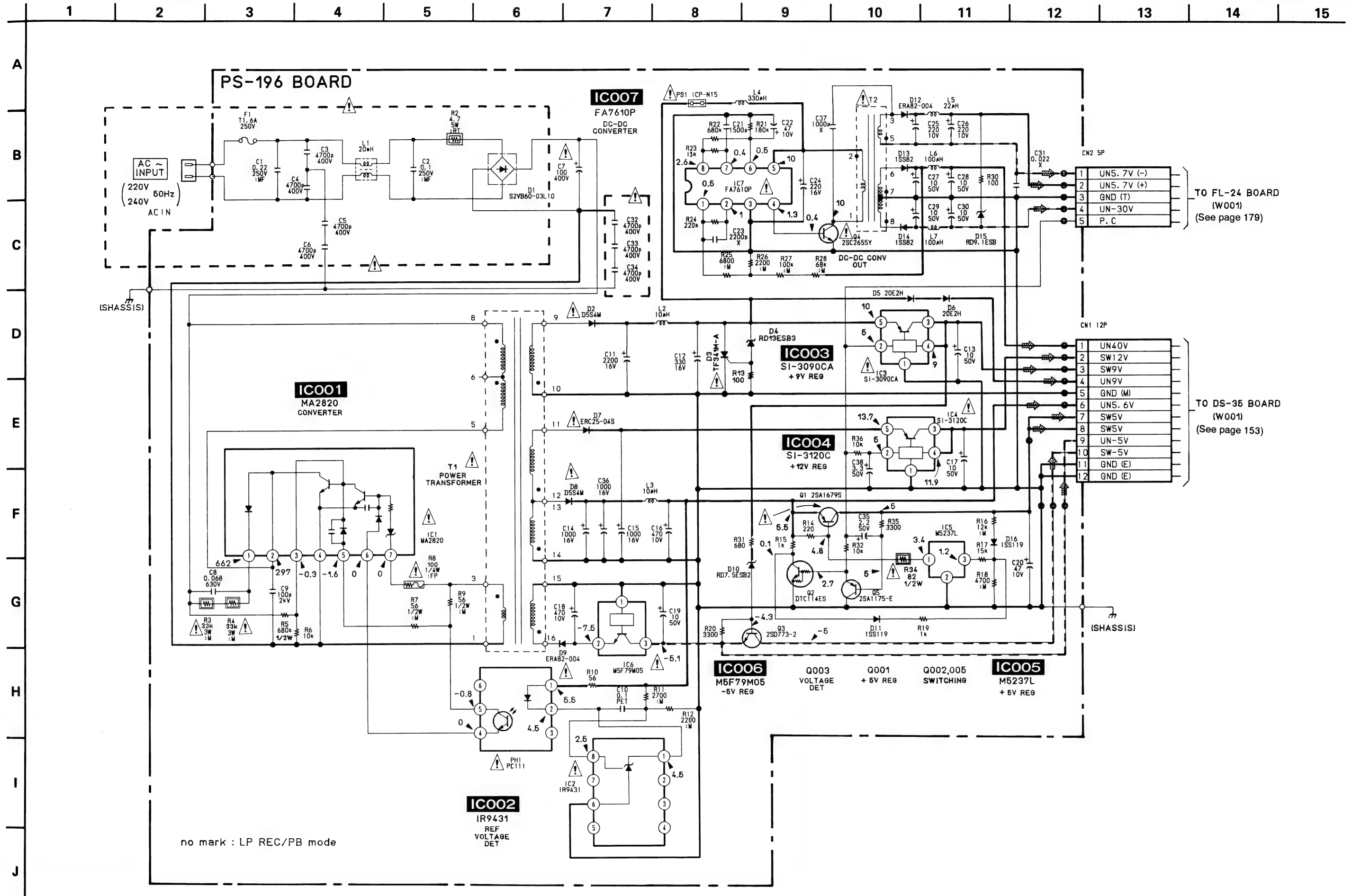
— Ref. No.: PS-196 Board; 12,000 series —

1G
a2
b2
c2
d2
e2
f2
g2

15

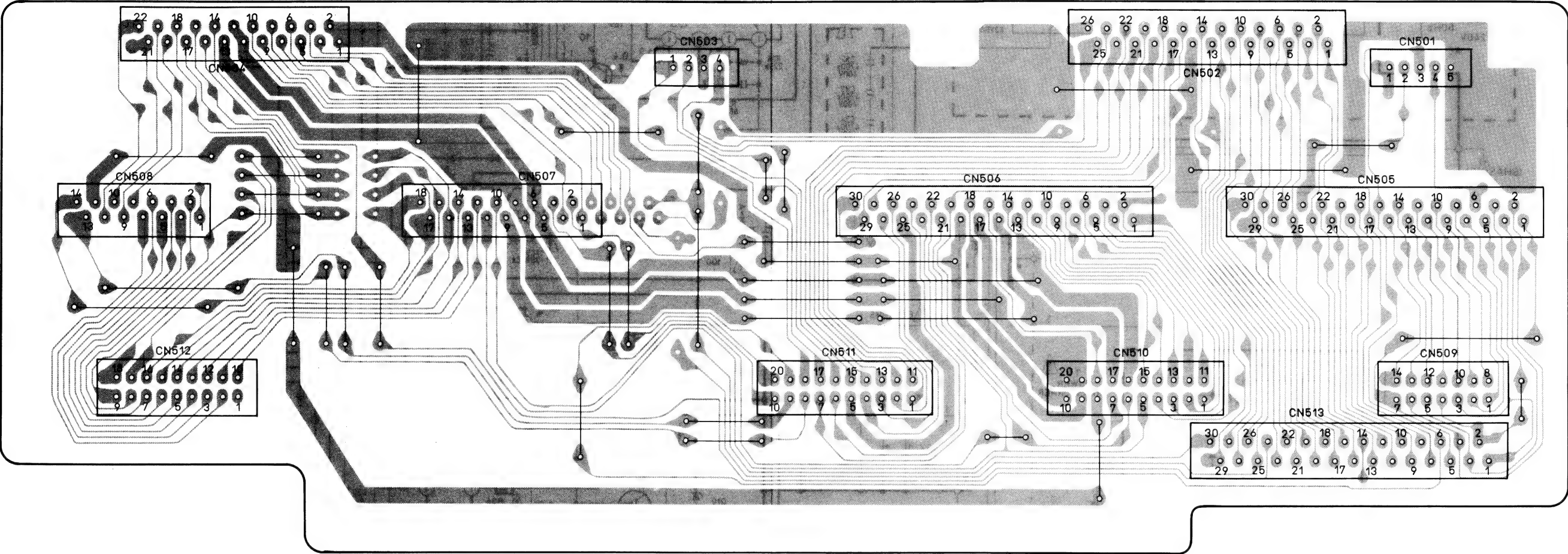


AUDIO

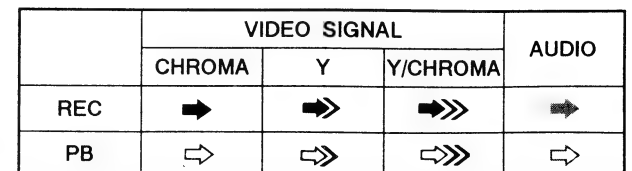


IN-24 (SIGNAL INTERMEDIATION) PRINTED WIRING BOARD  
- Ref. No.: IN-24 Board; 13,000 series -

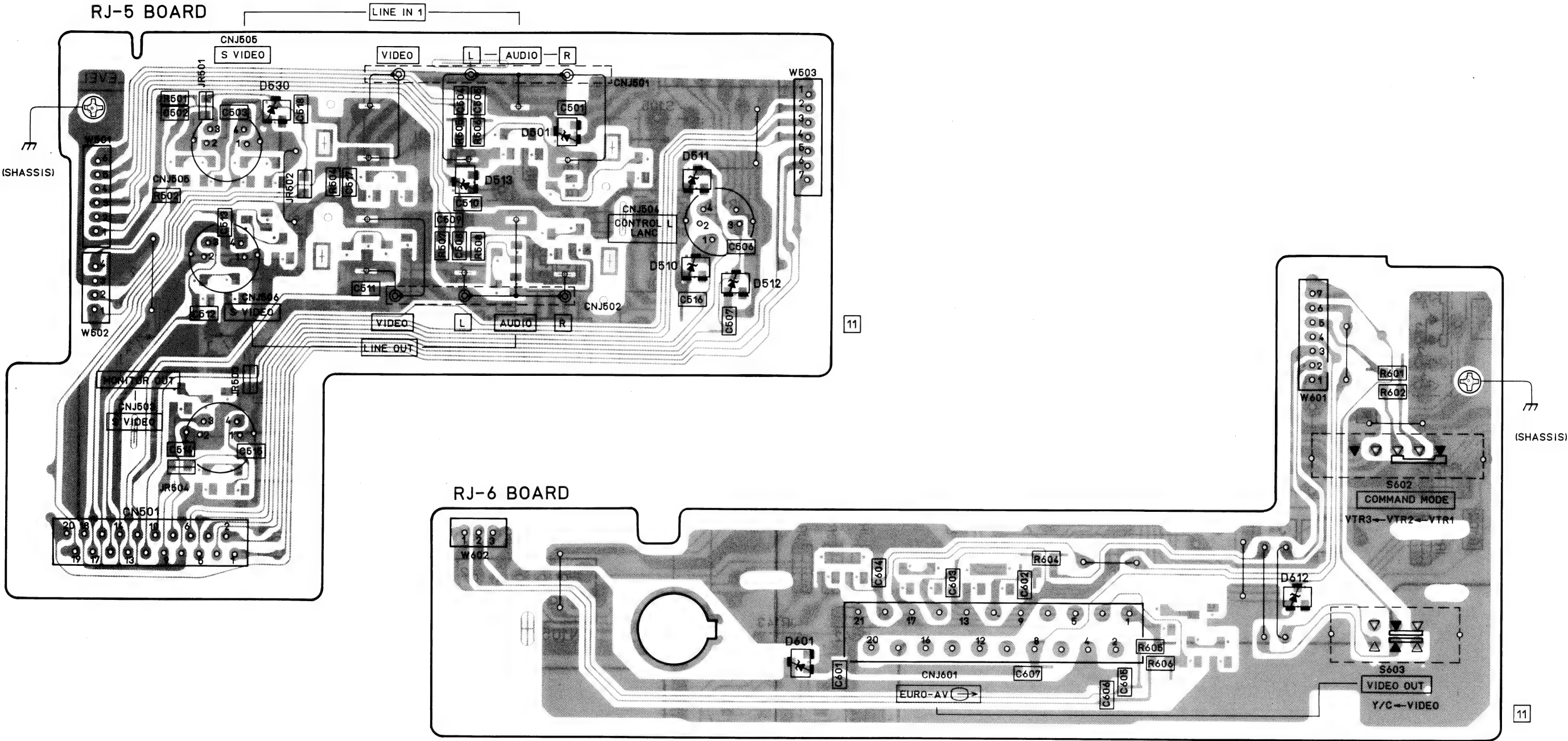
IN-24 BOARD



– Ref. No.: IN-24 Board; 13,000 series –







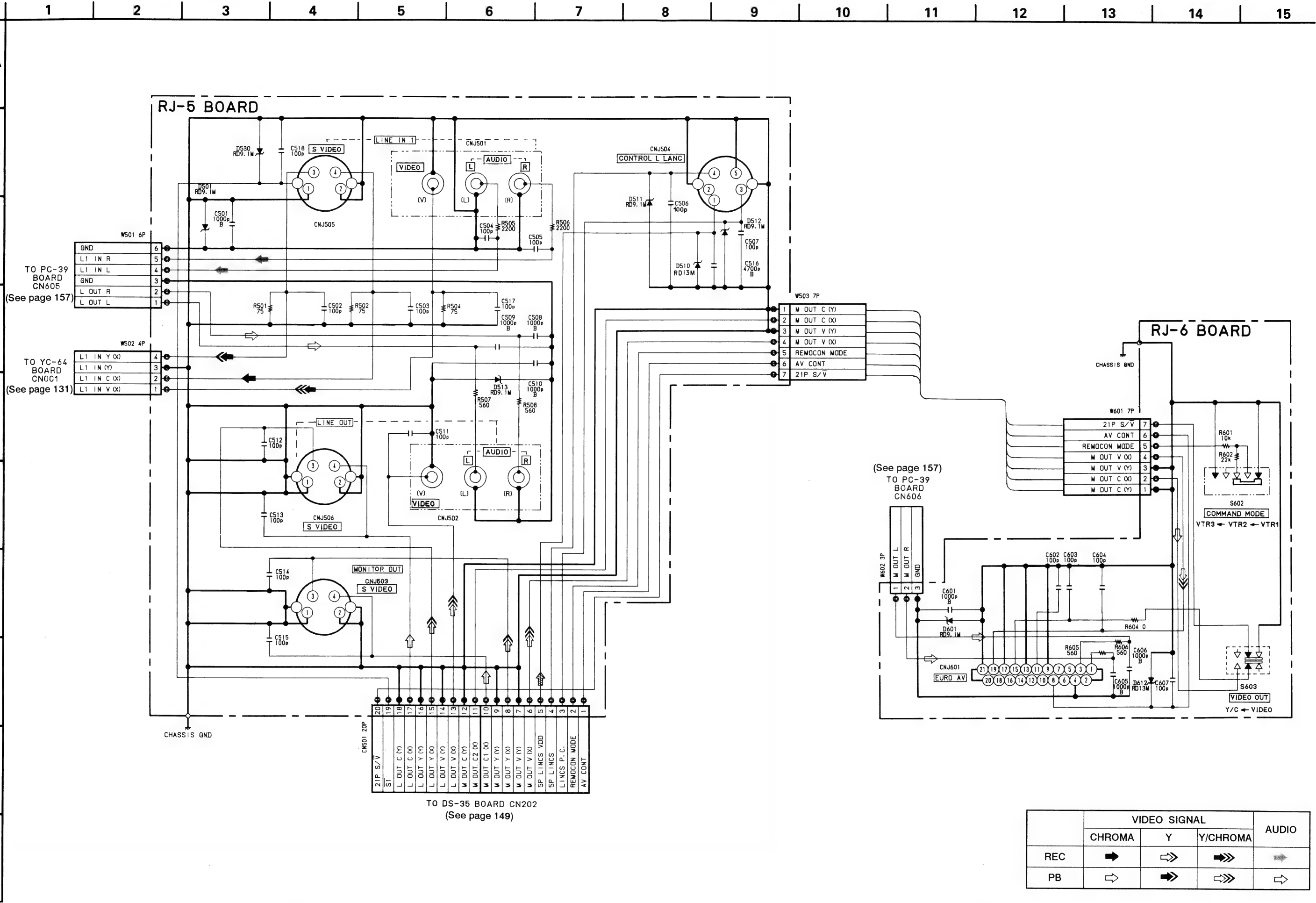
1
A
B
C
D
E
F
G
H
I
J

TO PC-3  
BOARD  
CN605  
(See page 15)

TO YC-6  
BOARD  
CN001  
(See page 13)

RJ-5 (LINE IN 1), RJ-6 (EURO-AV CONNECTOR) SCHEMATIC DIAGRAM

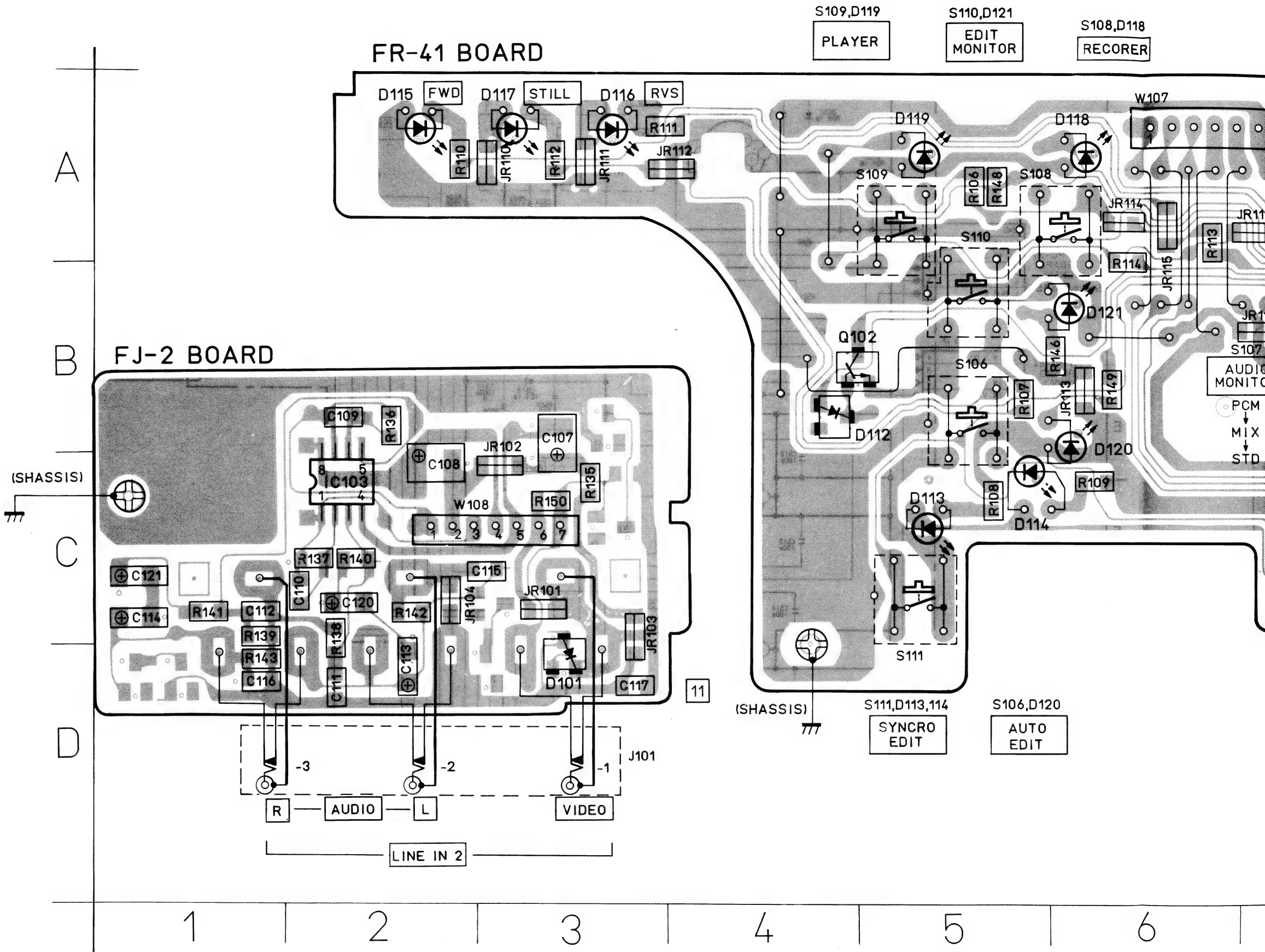
- Ref. No.: RJ-5, RJ-6 Boards; 14,000 series -



FR-41 (MODE CONTROL), FJ-2 (LINE IN 2) PRINTED WIRING BOARDS  
- Ref. No.: FR-41, FJ-2 Boards; 15,000 series -

FR-41 BOARD

D110	D-10
D111	C-7
D112	B-4
D113	C-5
D114	C-5
D115	A-2
D116	A-3
D117	A-3
D118	A-6
D119	A-5
D120	B-6
D121	B-6
IC101	B-11
IC102	C-13
Q101	C-8
Q102	B-4





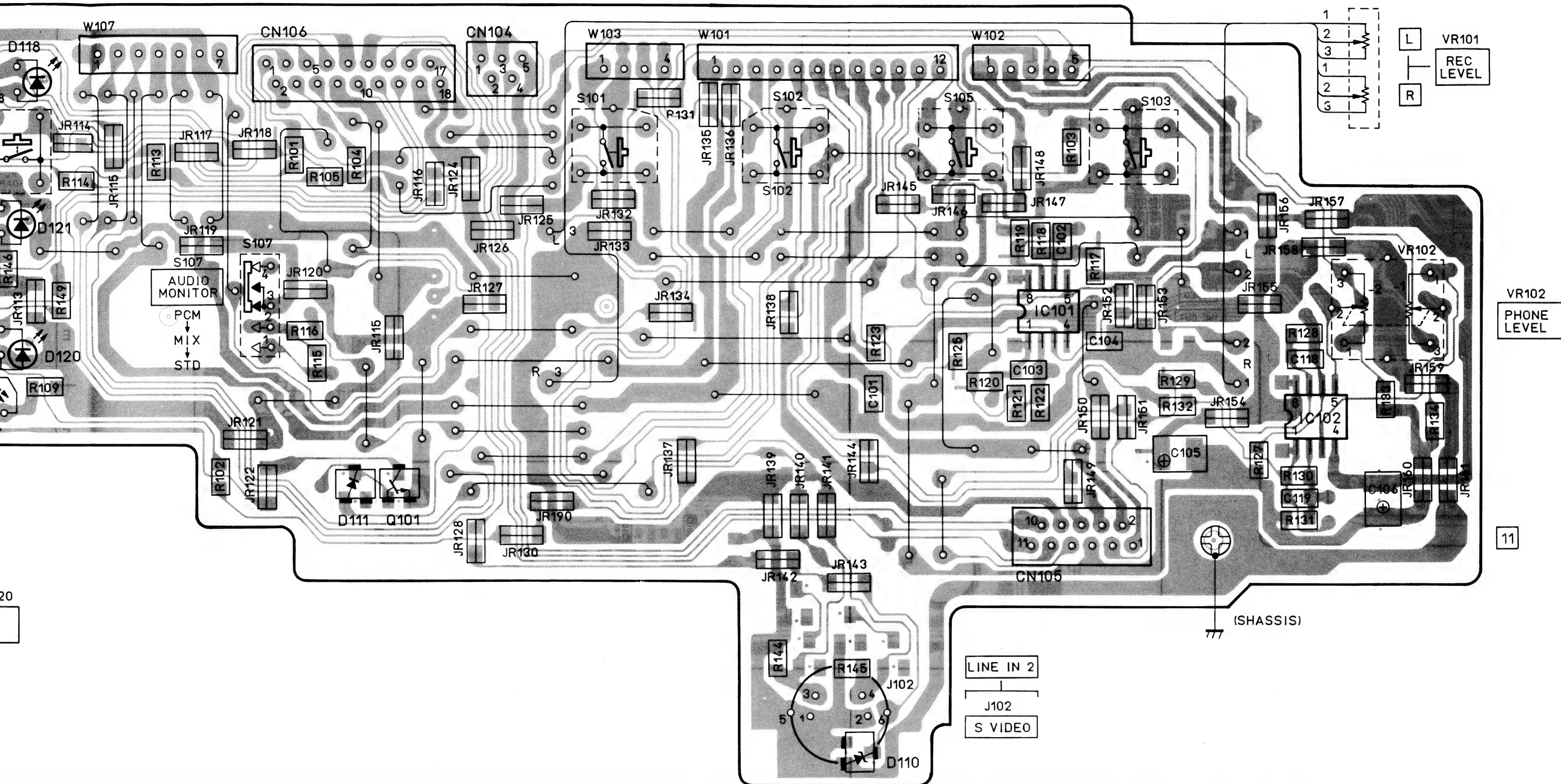
S108,D118  
RECORDER

S101  
INPUT  
SELECT

S102  
REC MODE  
SP/LP

S105  
ANT  
TV/VTR

S103  
COUNTER  
RESET



11

6

7

8

9

10

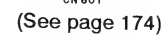
11

12

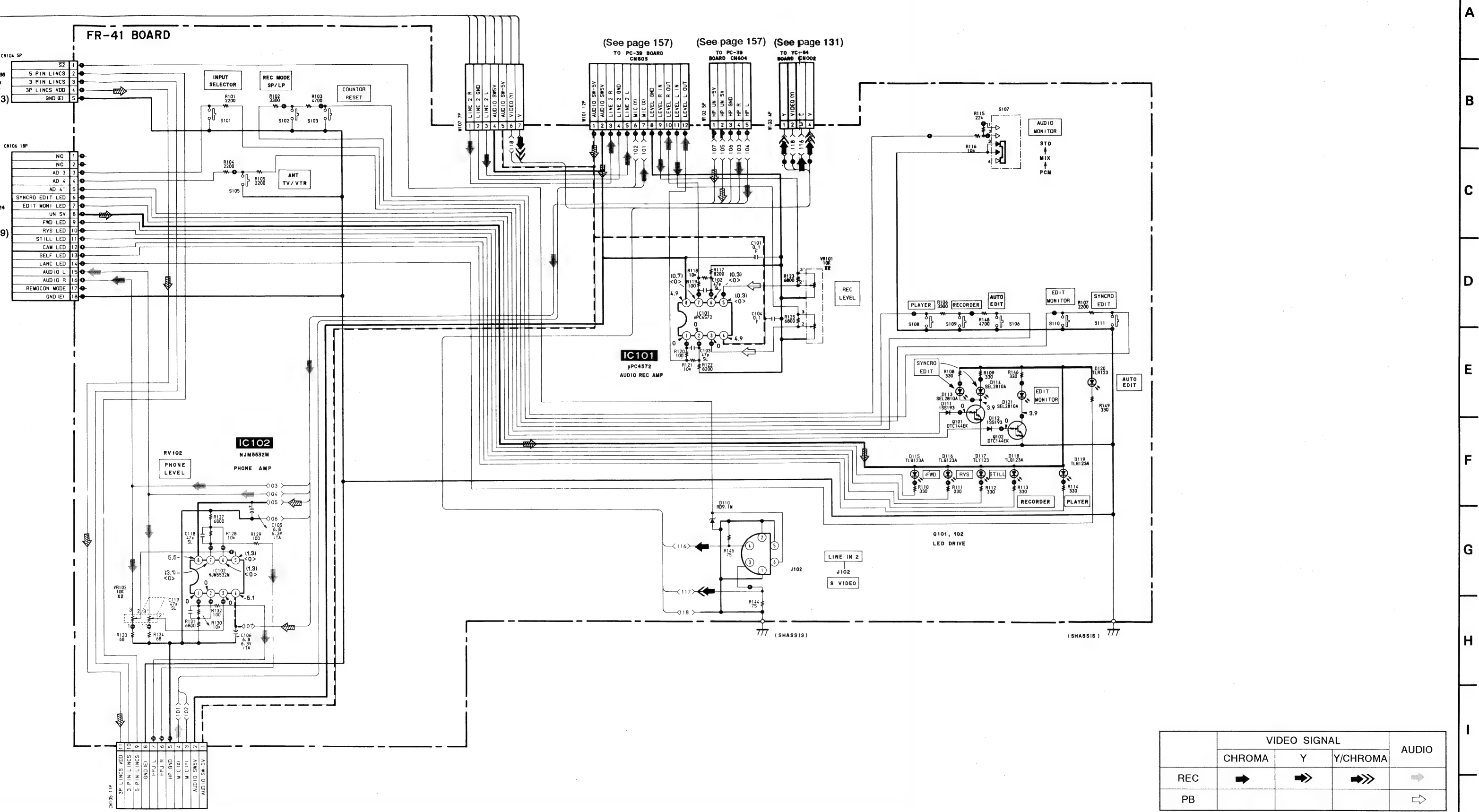
13



– Ref. No.: FR-41, FJ-2 Boards; 15,000 series –

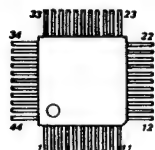


7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

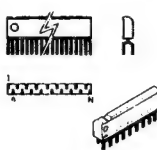


### 5-3. SEMICONDUCTORS

**CXA1449Q**



**M5M4C500L-10**



**TL431CLP**



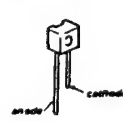
**2SB733-2  
2SD773**



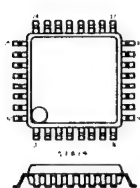
**RU-3AM**



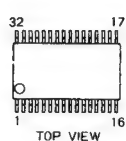
**EE-TP109**



**CX2106Q**



**M50455-137FP**



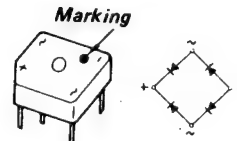
**UPC574J**



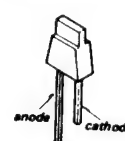
**2SC2655**



**S2VB60-03L10**



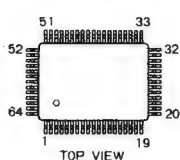
**PY5504S-1**



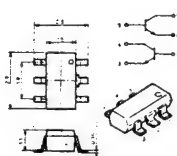
**FA7610P**



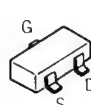
**M50541FP  
UPD75116-GF-605-3BE**



**IMZ1**



**2SK160-K5**



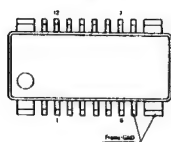
**TF341M-A**



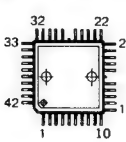
**SEL2810A**



**LB1631M**



**M51285BFP-V**



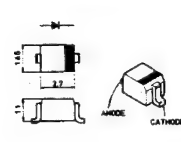
**2SA1175TP-HFE**



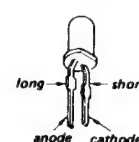
**D5S4M**



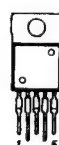
**1T33C-01**



**SLP281C-50  
TLR123  
TLY123**



**MC14052BF**



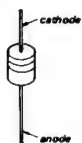
**S3050CA**



**2SA1679S**



**ERA82-004  
RD11ES-B2  
RD7.5ES-B2  
1SS119**



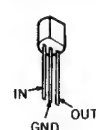
**AA3422S**



**TLP907-0**



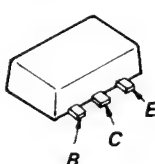
**M5F79M05**



**S8053ALB**



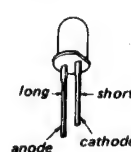
**2SB1121**



**RD9.1M-B1  
1SS83  
20E2H**



**EBR5534S**





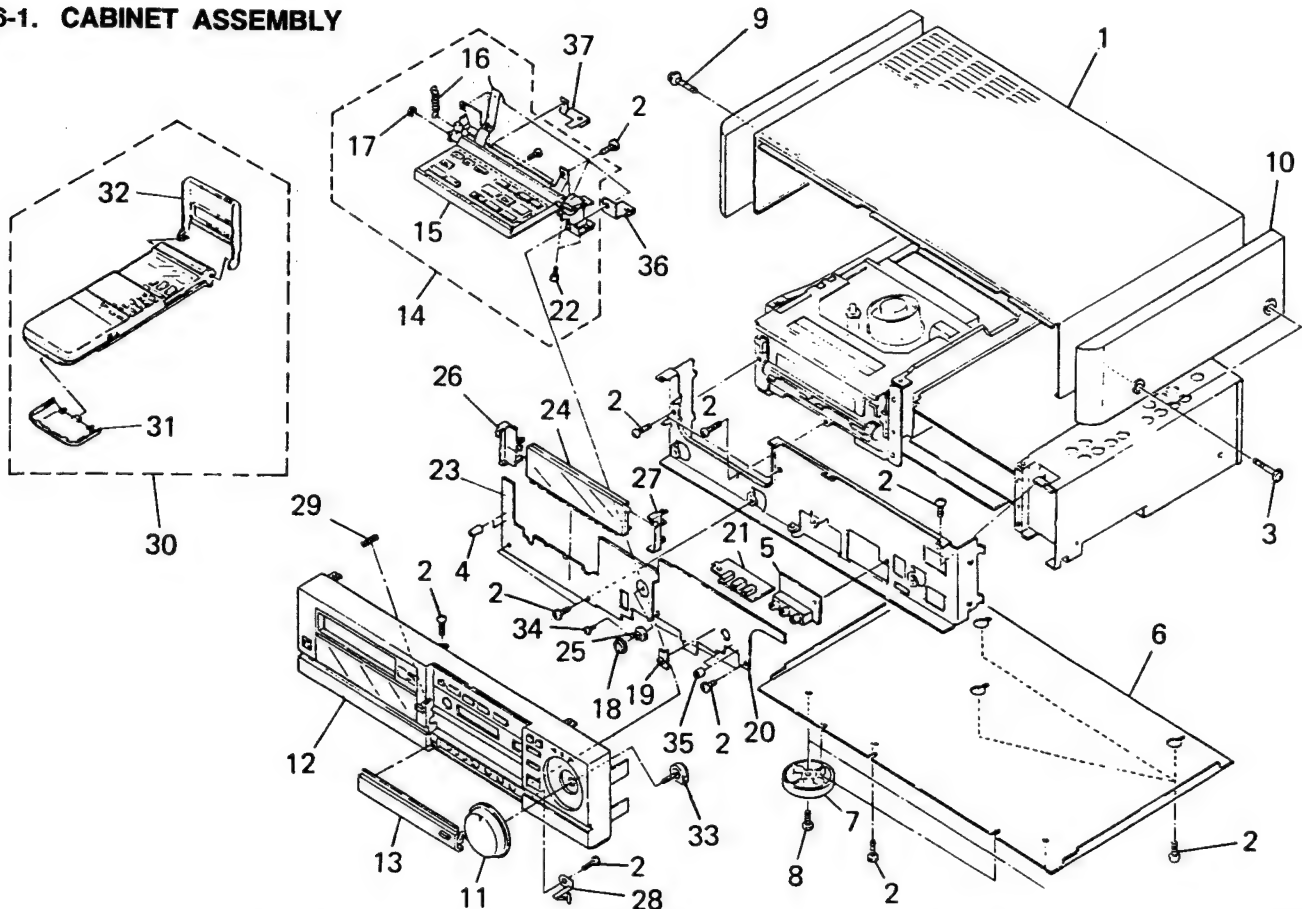
## SECTION 6

### EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.

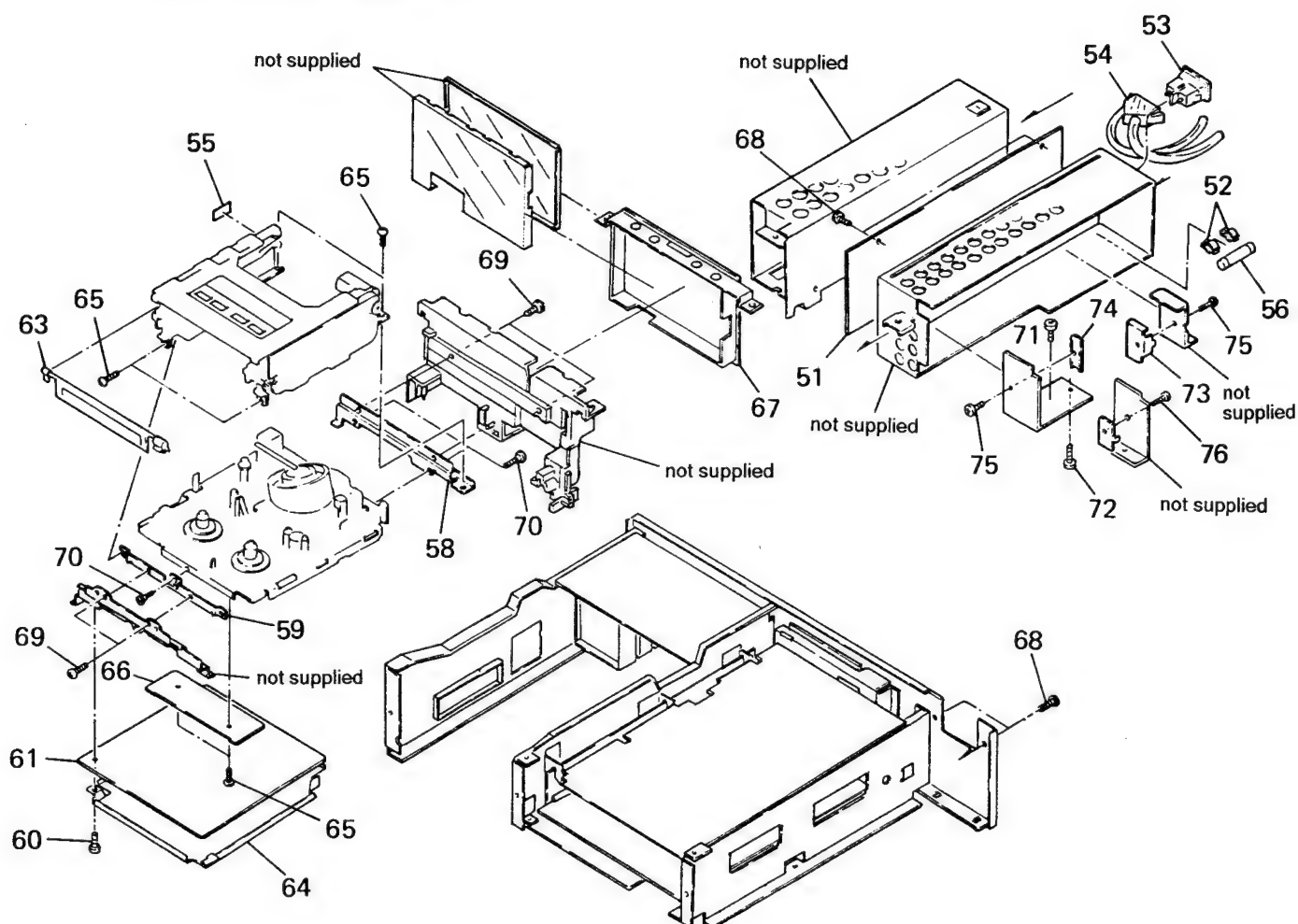
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

**6-1. CABINET ASSEMBLY**

No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-3742-504-1	CASE ASSY, UPPER (AEP)		16	3-571-823-00	SPRING, TENSION	
	X-3742-516-1	CASE ASSY, UPPER (UK)		17	7-624-105-04	STOP RING 2.3, TYPE -E	
2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		18	3-742-501-01	KNOB, HP	
3	3-721-342-11	SCREW (3), SIDE WOOD (AEP)		19	3-742-502-01	KNOB, SLIDE	
	4-886-821-01	SCREW, M3 CASE (UK)		20	*A-7061-812-A	FR-41 (A) BOARD, COMPLETE	
4	*3-697-607-01	HOLDER, (SU), LED		21	*A-7061-813-A	MC-37 BOARD, COMPLETE	
5	*A-7061-890-A	FJ-2 BOARD, COMPLETE		22	7-621-772-30	SCREW +B 2X6	
6	*3-742-559-01	PLATE, BOTTOM		23	*A-7061-811-A	FL-24 BOARD, COMPLETE (AEP)	
7	X-3713-423-1	FOOT ASSY (G) (AEP)			A-7062-055-A	FL-24(C) BOARD, COMPLETE (UK)	
	X-4922-508-1	FOOT ASSY (UK)		24	1-519-507-31	INDICATOR TUBE, FLUORESCENT (ND001)	
	4-922-942-01	FOOT (FELT)		25	3-731-123-01	BASE, VOLUME	
8	3-721-343-01	SCREW, FIXED, M4X7		26	*3-742-524-01	HOLDER (LEFT), INDICATION TUBE	
9	X-3742-505-1	PLATE (L) ASSY, SIDE (AEP)		27	*3-742-548-01	HOLDER (RIGHT), INDICATION TUBE	
10	X-3742-506-1	PLATE (R) ASSY, SIDE (AEP)		28	3-742-513-01	SPRING, LEAF	
11	X-3742-501-1	DIAL BLOCK ASSY (AEP)		29	3-554-017-00	SPRING, COMPRESSION	
	X-3742-514-1	DIAL BLOCK ASSY (UK)		30	A-6768-153-A	COMMANDER ASSY	
12	X-3742-509-1	PANEL ASSY, FRONT (AEP)		31	2-181-766-01	COVER, BATTERY	
	X-3742-517-1	PANEL ASSY, FRONT (UK)		32	2-181-770-11	COVER, TIMER	
13	X-3742-502-1	DOOR ASSY, JACK (AEP)		33	1-238-738-11	RES, VAR, CARBON 10K	
	X-3742-512-1	DOOR ASSY, JACK (UK)		34	7-627-552-38	SCREW, PRECISION +P 1.7X3	
14	A-7091-072-A	DOOR ASSY (AEP)		35	*3-689-521-01	HOLDER, LED, ROUND	
	A-7091-194-A	DOOR ASSY (UK)		36	*3-742-574-01	PLATE (R), GROUND, DOOR	
15	1-466-292-11	SWITCH BLOCK, CONTROL (AEP)		37	*3-742-575-01	PLATE (L), GROUND, DOOR	
	1-466-292-21	SWITCH BLOCK, CONTROL (UK)					



## 6-2. MAIN CHASSIS ASSEMBLY

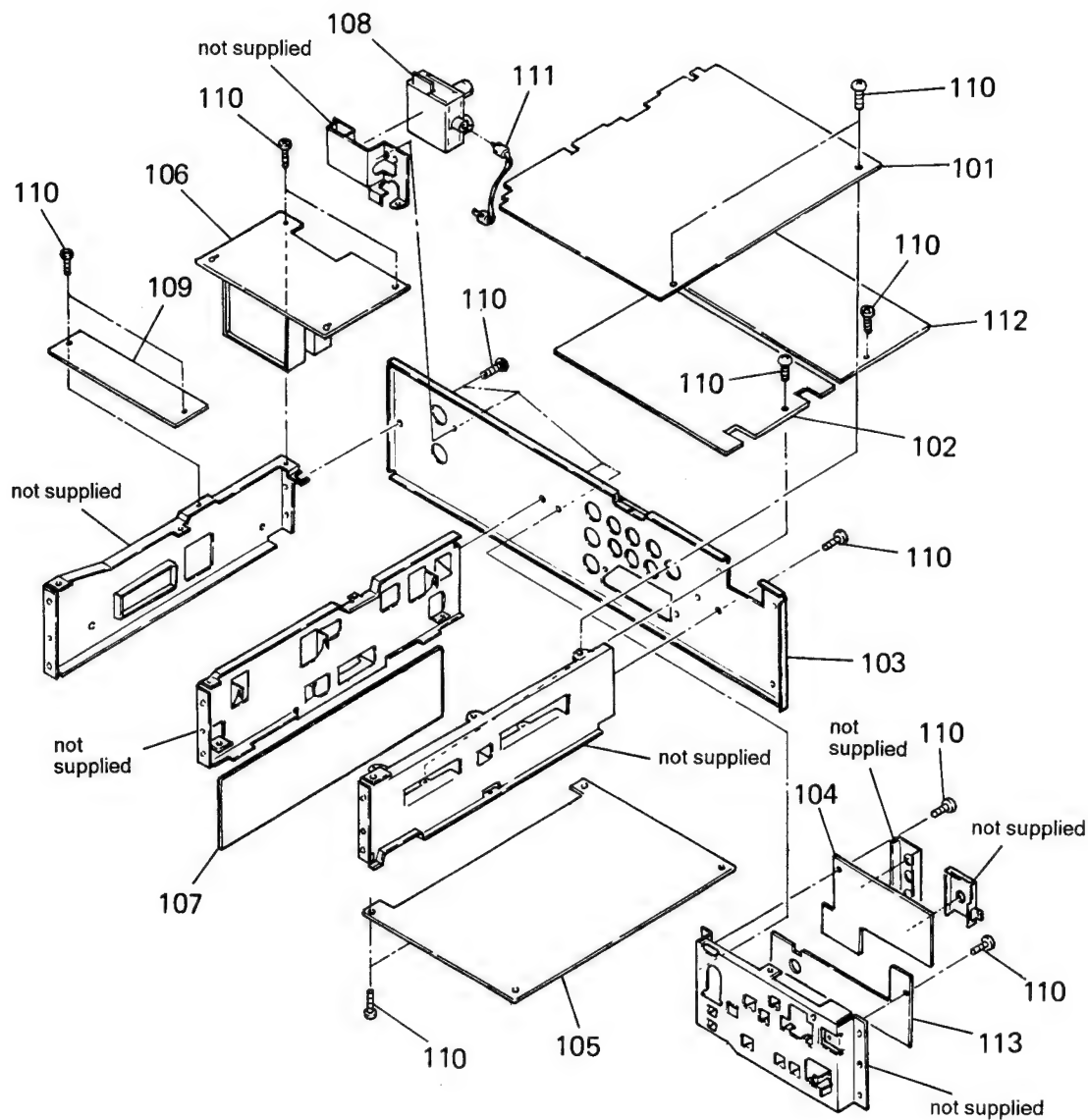


No.	Part No.	Description	Remark
51	*A-7061-815-A	PS-196 (A) BOARD, COMPLETE (AEP)	
	*A-7061-898-A	PS-196 (B) BOARD, COMPLETE (UK)	
52	▲.1-533-183-11	HOLDER, FUSE	
53	▲.1-540-054-11	INLET, AC	
54	▲.3-742-521-01	COVER, 2P INLET	
55	*3-730-176-11	SHEET, MD	
56	▲.1-532-259-00	FUSE, TIMER-LAG (1.6A 250V)	
58	*3-732-811-01	BRACKET (REAR)	
59	*3-732-810-02	BRACKET (FRONT)	
60	3-713-790-01	SCREW (M2X6), TAPPING, P3	
61	*A-7061-807-A	CM-15 (A) BOARD, COMPLETE	
63	X-3742-507-1	DOOR ASSY, CASSETTE COMPARTMENT	
64	*3-742-576-01	PLATE, SHIELD, MD	

No.	Part No.	Description	Remark
65	3-732-817-01	SCREW (2X4.5), TAPPING	
66	*1-633-519-11	UC-4 BOARD	
67	*A-7061-808-A	RP-74 (A) BOARD, COMPLETE	
68	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
69	7-627-553-47	PRECISION SCREW +P 2X4 TYPE 3	
70	3-732-816-01	SCREW, STEP	
71	7-685-647-79	SCREW +BVTP 3X10	
72	*3-714-460-01	RETAINER, TRANSISTOR	
73	3-731-146-01	RETAINER, (B), PS	
74	3-731-147-01	RETAINER, (A), PS	
75	7-628-253-40	SCREW +PS 2X10	
76	7-621-555-60	SCREW +K 2X10	

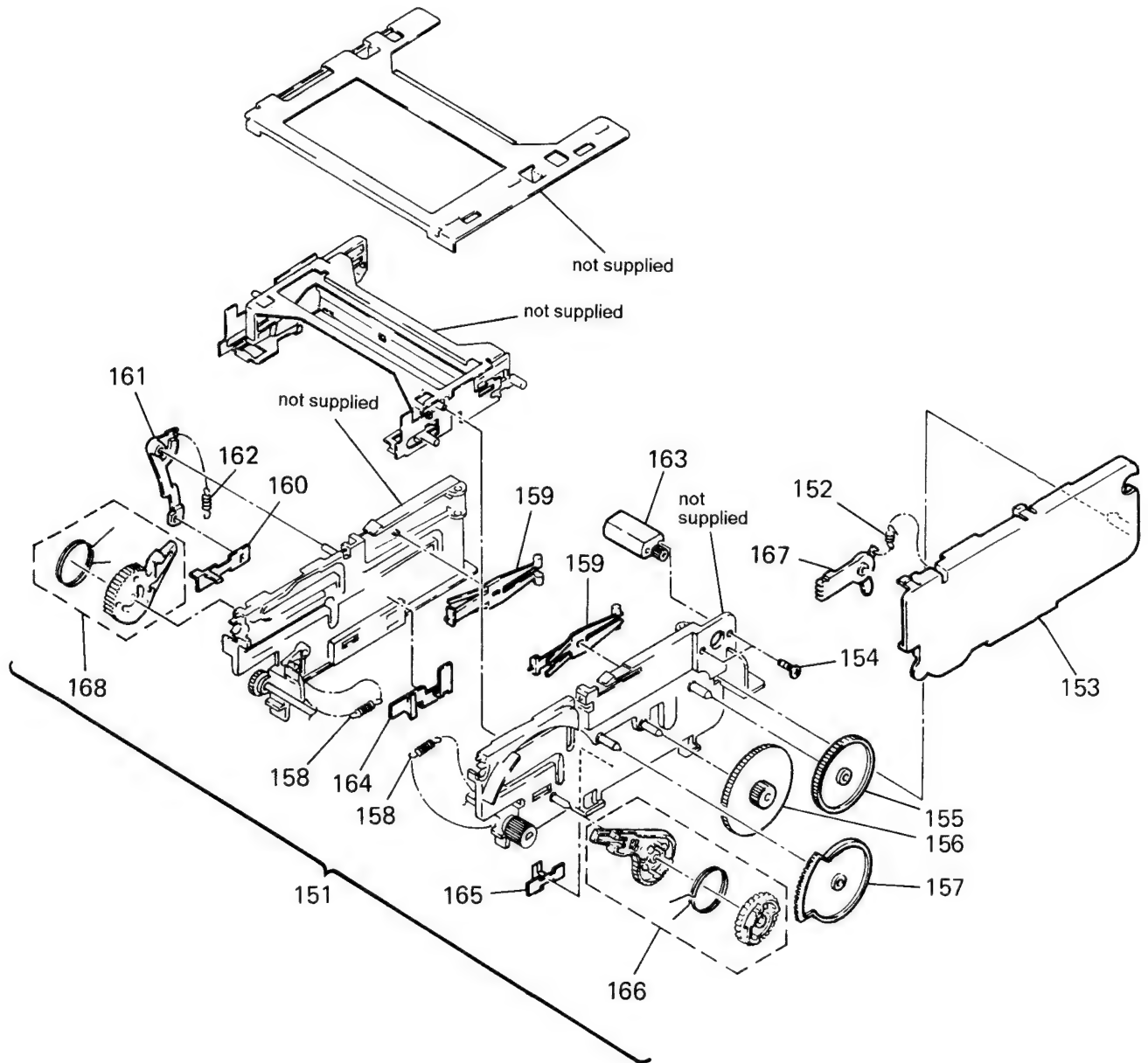
**Note:** The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

### 6-3. MAIN BOARD ASSEMBLY



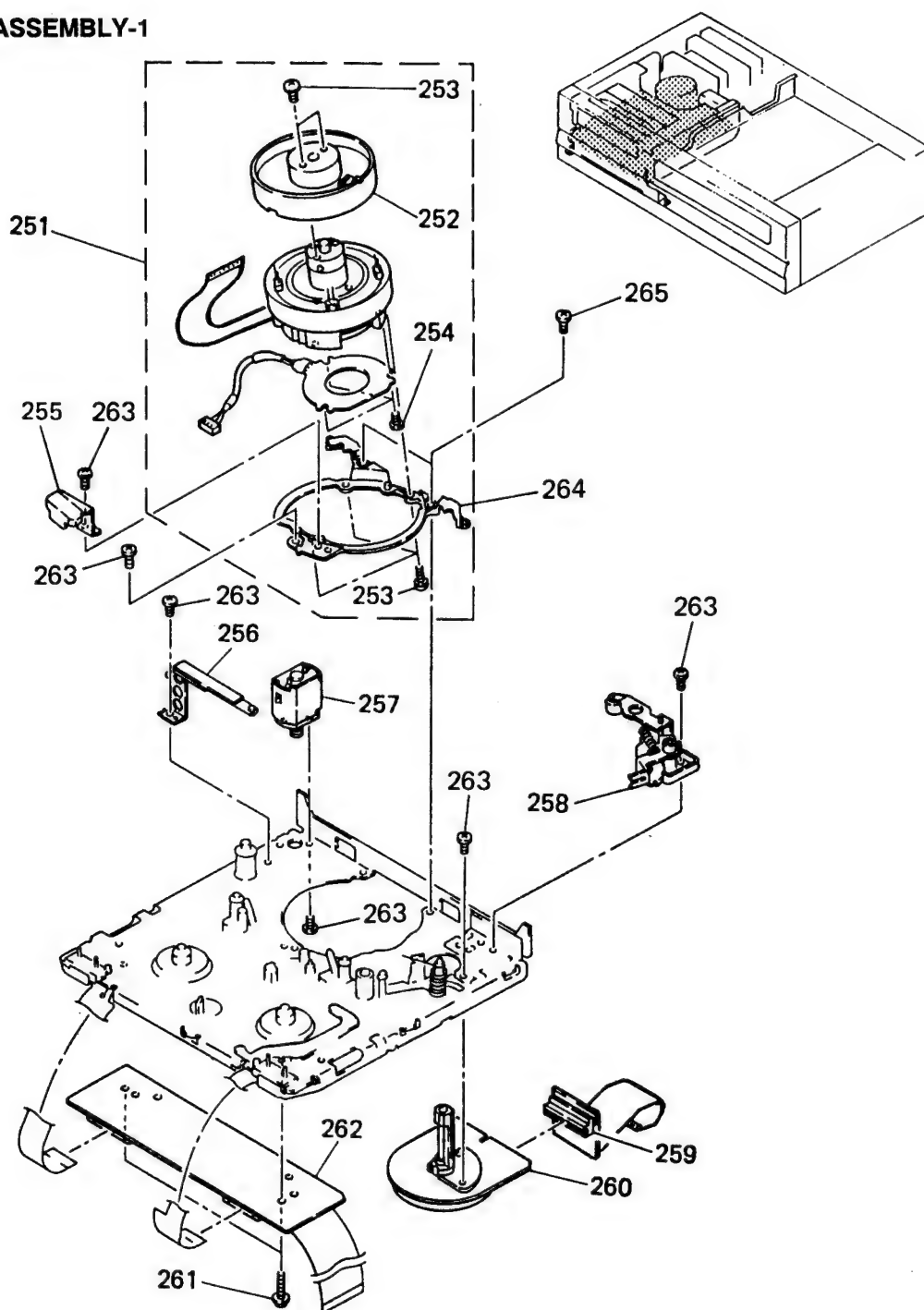
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	*A-7061-810-A	VI-65 (A) BOARD, COMPLETE		108	1-466-199-11	MODULATOR, RF (RFU-2010) (AEP)	
102	*A-7061-940-A	PC-39 (A) BOARD, COMPLETE			1-466-206-11	MODULATOR, RF (RFU-2011) (UK)	
103	3-742-564-01	FRAME, REAR (AEP)		109	*A-7061-899-A	NM-2 (A) BOARD, COMPLETE (UK)	
104	*A-7061-805-A	RJ-5 BOARD, COMPLETE		110	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
105	*A-7061-816-A	DS-35 (A) BOARD, COMPLETE (AEP)		111	1-555-110-00	CABLE, PIN	
	*A-7061-892-A	DS-35 (B) BOARD, COMPLETE (UK)		112	*A-7061-896-A	YC-64 (B) BOARD, COMPLETE (UK)	
106	*A-7061-814-A	TU-100 BOARD, COMPLETE (AEP)			*A-7061-900-A	YC-64 (A) BOARD, COMPLETE (AEP)	
	*A-7061-897-A	TU-100 (C) BOARD, COMPLETE (UK)		113	*A-7061-806-A	RJ-6 BOARD, COMPLETE	
107	*1-633-526-11	IN-24 BOARD					

## 6-4. CASSETTE COMPARTMENT ASSEMBLY



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
151	A-7090-892-A	CASSETTE COMPARTMENT ASSY, FL		160	3-731-189-01	SLIDER, LOCK	
152	3-731-175-02	SPRING, TENSION		161	3-731-188-01	ARM LOCK, DRIVING	
153	3-732-804-03	COVER, GEAR		162	3-731-174-01	SPRING, TENSION	
154	3-730-141-01	SCREW (PSW) (2X4)		163	X-3731-108-1	MOTOR ASSY	
155	3-731-182-01	GEAR (B), DECELERATION		164	X-3726-867-1	PRISM (LEFT) ASSY	
156	3-731-181-01	GEAR (A), DECELERATION		165	X-3726-866-1	PRISM (RIGHT) ASSY	
157	3-731-192-01	GEAR, MIDWAY		166	X-3731-109-2	ARM (RIGHT) ASSY, DRIVING	
158	3-731-176-02	SPRING, TENSION		167	3-731-185-01	LINK, SWITCHING, DOOR	
159	3-731-184-02	HOLDER LOCK		168	X-3731-111-1	ARM (LEFT) ASSY, DRIVING	

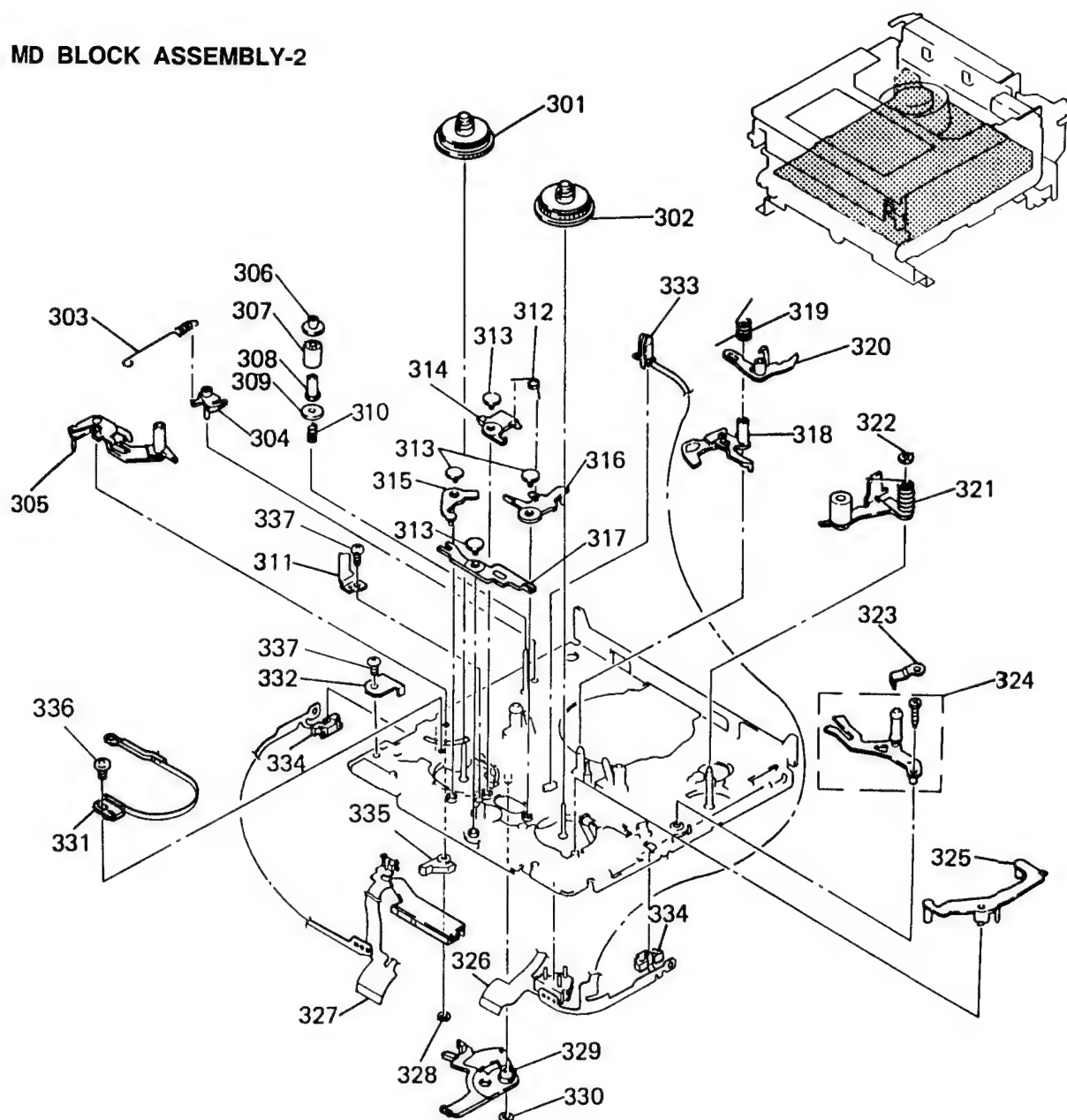
## 6-5. MD BLOCK ASSEMBLY-1



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
251	A-7048-339-A	DRUM ASSY (DGR-58A-R)		259	*1-633-518-11	CC-26 BOARD	
252	A-7049-293-A	DRUM ASSY, UPPER, ROTARY (DGR-58-R)		260	8-835-331-01	MOTOR, DC U-22A	
253	3-686-493-01	SCREW (M2X5), P1		261	3-732-817-01	SCREW (2X4.5), TAPPING	
254	3-686-458-02	SCREW (P1.4X2.5) TAPPING		262	*1-633-519-11	UC-4 BOARD	
255	3-728-868-01	GUARD, GUIDE		263	3-728-998-01	SCREW (M2X3), SPECIAL HEAD	
256	1-535-739-12	TERMINAL, SHAFT EARTH		264	X-3686-474-4	BASE ASSY, DRUM	
257	A-7040-160-A	MOTOR ASSY, THREADING		265	3-736-406-01	SCREW (3) (M2X10)	
258	A-7040-161-B	ROLLER BLOCK ASSY, HC					

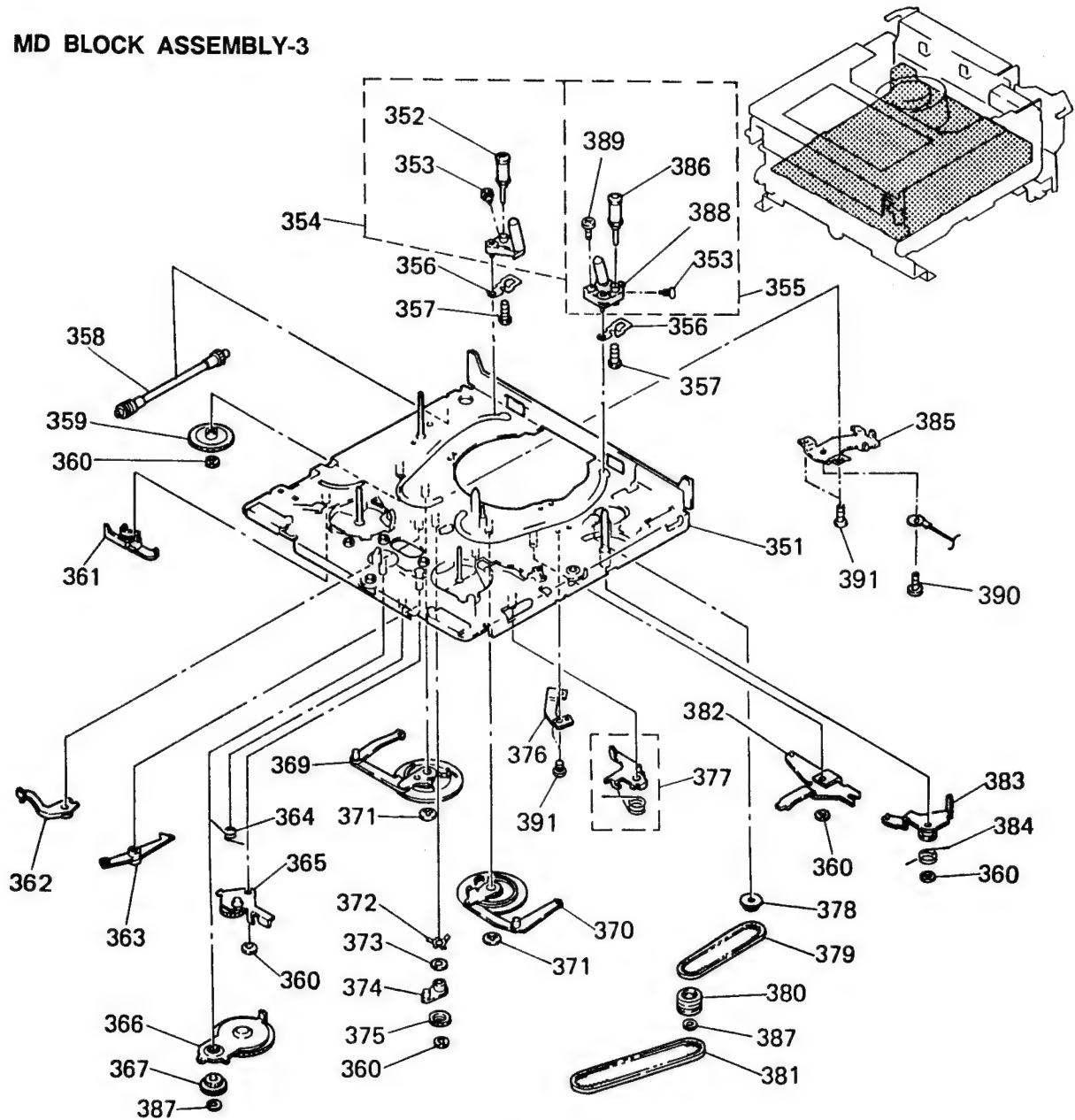


## 6-6. MD BLOCK ASSEMBLY-2



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
301	X-3728-851-1	TABLE ASSY, REEL, S		320	3-728-852-02	ARM, RK STOPPER	
302	X-3728-855-1	TABLE ASSY, REEL, T		321	A-7040-163-B	ARM BLOCK ASSY, PINCH	
303	3-736-414-01	SPRING, TENSION		322	3-669-465-00	WASHER (1.5), STOPPER	
304	3-728-855-03	ARM, ADJUSTMENT		323	3-728-808-01	SPRING, LEAF	
305	X-3728-867-1	ARM ASSY (S), TENSION REGULATOR		324	X-3726-822-1	ARM ASSY, TG7	
306	3-726-884-01	FLANGE, UPPER, TG2		325	3-728-848-01	ARM, LB RELEASE	
307	3-726-883-01	ROLLER, TG2		326	1-628-061-12	FP-90 FLEXIBLE BOARD	
308	3-726-885-01	SLEEVE, TG2		327	1-633-660-11	FP-237 FLEXIBLE BOARD	
309	3-726-882-02	FLANGE, LOWER, TG2		328	3-321-393-11	WASHER, STOPPER	
310	3-726-886-01	SPRING, COMPRESSION		329	X-3728-863-1	LEVER ASSY, SW	
311	3-726-848-01	RETAINER, TL		330	3-726-829-01	WASHER, STOPPER	
312	3-726-866-01	SPRING (ST), TORSION		331	X-3726-809-2	BAND ASSY, TENSION REGULATOR	
313	3-726-858-01	PIN, SHAFT RETAINER		332	3-730-125-01	RETAINER, SW	
314	3-728-849-01	BRAKE, S		333	3-728-837-01	HOLDER, LED	
315	3-726-852-01	BRAKE, LB		334	3-728-869-02	HOLDER, SENSOR	
316	3-728-850-01	BRAKE, T		335	X-3728-857-1	STOPPER ASSY, TENSION REGULATOR	
317	3-726-853-01	LEVER, LB		336	3-728-998-01	SCREW (M2X3), SPECIAL HEAD	
318	3-728-875-01	STOPPER, RK		337	7-627-555-88	SCREW (M1.4X1.8)	
319	3-726-864-01	SPRING (RK), TORSION					

## 6-7. MD BLOCK ASSEMBLY-3



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
351	*X-3728-801-1	CHASSIS ASSY, MECHANICAL		372	3-726-867-01	SPRING, LEAF	
352	X-3728-808-1	ROLLER ASSY (U) (SUS), GUIDE		373	3-701-436-21	WASHER, POLYETHYLENE	
353	3-726-822-01	SCREW (M1.4X2) (STEP), HEAD		374	3-726-857-02	ARM, UL	
354	A-7040-204-A	COASTER (LEFT) BLOCK ASSY		375	3-726-856-02	GEAR, UL	
355	A-7040-215-A	COASTER (RIGHT) BLOCK ASSY (NIS)		376	*3-726-805-01	REINFORCEMENT (TT)	
	A-7040-220-A	COASTER (RIGHT) BLOCK ASSY-NIP		377	X-3726-808-2	BRAKE ASSY, TS	
356	3-736-485-01	SPRING, LEAF, COSTER		378	X-3726-805-1	GEAR ASSY, JOINT	
357	3-726-830-01	SCREW (M1.4X4) (THREE LOCK)		379	3-728-866-11	BELT (S), TIMING	
358	X-3726-807-1	WORM ASSY		380	X-3726-838-1	PULLEY (UPPER) ASSY, MIDWAY	
359	3-726-826-01	GEAR, WHEEL		381	3-728-865-11	BELT (L), TIMING	
360	3-726-829-01	WASHER, STOPPER		382	X-3728-846-1	LEVER ASSY, LOADING	
361	3-728-842-01	LEVER, EJECT		383	X-3726-824-1	ARM ASSY, PINCH SUB	
362	3-728-851-01	BRAKE, UL		384	3-726-895-01	SPRING	
363	3-726-854-01	ARM, BRAKE RELEASE		385	X-3726-841-1	REINFORCEMENT (SS) ASSY	
364	3-726-865-01	SPRING (LB), TORSION		386	X-3728-810-1	ROLLER ASSY (U)(PLATING), GUIDE	
365	A-7040-130-A	GEAR BLOCK ASSY, LB		387	3-321-393-11	WASHER, STOPPER	
366	X-3726-802-2	GEAR ASSY, RK		388	X-3728-852-1	COASTER (RIGHT) ASSY	
367	X-3726-812-1	GEAR ASSY, RC		389	3-736-473-01	SCREW (M2X0.25) (THREE LOCK)	
369	X-3728-842-1	GEAR (LEFT) ASSY, DRIVE		390	3-703-502-01	SCREW (1.4X1.6)	
370	X-3728-843-1	GEAR (RIGHT) ASSY, DRIVE		391	7-627-555-88	SCREW (M1.4X1.8)	
371	3-669-465-00	WASHER (1.5), STOPPER					

# SECTION 7

## ELECTRICAL PARTS LIST

RJ-5

RJ-6

CM-15

## NOTE:

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- **RESISTORS**  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- **SEMICONDUCTORS**  
In each case, U:  $\mu$ , for example:  
UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,  
UPB...:  $\mu$ PB..., UPC...:  $\mu$ PC...,  
UPD...:  $\mu$ PD...
- **CAPACITORS**  
MF:  $\mu$ F, PF:  $\mu$ F
- **COILS**  
MMH: mH, UH:  $\mu$ H

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
*A-7061-805-A RJ-5 BOARD, COMPLETE *****				R505 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W			
<u>CAPACITOR</u>				R506 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W			
C501	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	R507 1-216-043-00 METAL GLAZE 560 5% 1/10W			
C502	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	R508 1-216-043-00 METAL GLAZE 560 5% 1/10W			
C503	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	*****			
C504	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	*A-7061-806-A RJ-6 BOARD, COMPLETE *****			
C505	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	<u>CAPACITOR</u>			
C506	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C601	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C507	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C602	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C508	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C603	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C509	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C604	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C510	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C605	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C511	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C606	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C512	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C607	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C513	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	<u>JACK</u>			
C514	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CNJ601	1-561-534-41	SOCKET 21P	
C515	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	<u>DIODE</u>			
C516	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D601	8-719-106-43	DIODE RD9.1M-B1	
C517	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	D612	8-719-106-80	DIODE RD13M-B2	
C518	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	<u>RESISTOR</u>			
<u>CONNECTOR</u>				R601	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
CN501	1-563-623-11	CONNECTOR, FLEXIBLE 20P		R602	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
<u>JACK</u>				R604	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNJ501	1-568-212-11	JACK 3P (LINE IN 1)		R605	1-216-043-00	METAL GLAZE 560 5% 1/10W	
CNJ502	1-568-212-11	JACK 3P (LINE OUT)		R606	1-216-043-00	METAL GLAZE 560 5% 1/10W	
CNJ503	1-566-850-31	CONNECTOR, (S) TERMINAL 4P (MONITOR OUT)		<u>SWITCH</u>			
CNJ504	1-562-589-11	SOCKET, DIN (SMALL TYPE) 5P (CONTROL L LANC)		S602	1-572-210-11	SWITCH, SLIDE (COMMAND MODE)	
CNJ505	1-566-850-31	CONNECTOR, (S) TERMINAL 4P (LINE IN 1/S VIDEO)		S603	1-554-481-00	SWITCH, SLIDE (VIDEO OUT)	
CNJ506	1-566-850-31	CONNECTOR, (S) TERMINAL 4P (LINE OUT/S VIDEO)		*****			
<u>DIODE</u>				*A-7061-807-A CM-15 (A) BOARD, COMPLETE *****			
D501	8-719-106-43	DIODE RD9.1M-B1		<u>CAPACITOR</u>			
D510	8-719-106-43	DIODE RD9.1M-B1		C301	1-126-157-11	ELECT 10MF 20% 16V	
D511	8-719-106-43	DIODE RD9.1M-B1		C302	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
D512	8-719-106-43	DIODE RD9.1M-B1		C303	1-126-157-11	ELECT 10MF 20% 16V	
D513	8-719-106-43	DIODE RD9.1M-B1		C304	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
D530	8-719-106-43	DIODE RD9.1M-B1		C305	1-163-009-11	CERAMIC CHIP 0.001MF 50V	
<u>JUMPER RESISTOR</u>				C306	1-163-009-11	CERAMIC CHIP 0.001MF 50V	
JR501	1-216-295-00	METAL GLAZE 0 5% 1/10W		C307	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
JR502	1-216-295-00	METAL GLAZE 0 5% 1/10W		C308	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
JR503	1-216-295-00	METAL GLAZE 0 5% 1/10W		C309	1-164-232-11	CERAMIC CHIP 0.01MF 50V	
JR504	1-216-295-00	METAL GLAZE 0 5% 1/10W		C310	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V	
<u>RESISTOR</u>				C311	1-164-182-11	CERAMIC CHIP 0.0033MF 10% 50V	
R501	1-216-022-00	METAL GLAZE 75 5% 1/10W					
R502	1-216-022-00	METAL GLAZE 75 5% 1/10W					
R504	1-216-022-00	METAL GLAZE 75 5% 1/10W					

Ref.No	Part No.	Description		Remark	Ref.No	Part No.	Description		Remark
C312	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	C426	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V
C313	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C427	1-126-157-11	ELECT 10MF	20%	16V
C314	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	C428	1-124-638-11	ELECT 22MF	20%	6.3V
C315	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C430	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V
C316	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C431	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V
C317	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C432	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V
C318	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C433	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V
C319	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C434	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C320	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	C435	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C321	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C436	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C322	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C437	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V
C323	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V	C440	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C324	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	C441	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C325	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C442	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C326	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C501	1-130-495-00	MYLAR 0.1MF	5%	50V
C327	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C502	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C328	1-162-638-11	CERAMIC CHIP 1MF		16V	C503	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C329	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	C504	1-163-019-00	CERAMIC CHIP 180PF	10%	50V
C330	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	C505	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C331	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C506	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C333	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	C507	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C334	1-126-094-11	ELECT 4.7MF	20%	25V	C508	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C337	1-126-162-11	ELECT 3.3MF	20%	50V	C509	1-163-123-00	CERAMIC CHIP 180PF	5%	50V
C338	1-136-017-00	CERAMIC CHIP 0.0047MF		50V	C510	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C339	1-136-017-00	CERAMIC CHIP 0.0047MF		50V	C511	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C351	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C512	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C354	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C513	1-127-491-00	ELECT(SOLID) 22MF	20%	10V
C355	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C514	1-124-589-11	ELECT 47MF	20%	16V
C356	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C515	1-127-499-81	ELECT(SOLID) 22MF	20%	16V
C357	1-163-227-00	CERAMIC CHIP 10PF	5%	50V	C516	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C401	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	C517	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C402	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	C518	1-127-491-00	ELECT(SOLID) 22MF	20%	10V
C403	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C520	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C404	1-126-154-11	ELECT 47MF	20%	6.3V	CONNECTOR				
C405	1-163-035-00	CERAMIC CHIP 0.047MF		50V	CN301	*1-566-183-61	PIN, CONNECTOR (PC BOARD) 4P		
C406	1-163-035-00	CERAMIC CHIP 0.047MF		50V	CN302	*1-566-183-21	PIN, CONNECTOR (PC BOARD) 4P		
C407	1-162-638-11	CERAMIC CHIP 1MF		16V	CN303	1-574-346-12	CONNECTOR, FPC/FFC 15P		
C408	1-162-638-11	CERAMIC CHIP 1MF		16V	CN304	1-506-483-21	PIN, CONNECTOR 4P		
C409	1-126-154-11	ELECT 47MF	20%	6.3V	CN401	1-566-514-11	CONNECTOR, FPC (ZIF) 14P		
C410	1-163-038-00	CERAMIC CHIP 0.1MF		25V	CN401	1-575-389-11	CABLE, FLAT (1.0MM PITCH) 14P		
C411	1-162-638-11	CERAMIC CHIP 1MF		16V	CN402	1-575-361-11	CONNECTOR, FPC/FFC 9P		
C412	1-162-638-11	CERAMIC CHIP 1MF		16V	CN402	1-575-388-11	CABLE, FLAT (1.0MM PITCH) 9P		
C413	1-126-154-11	ELECT 47MF	20%	6.3V	CN403	*1-563-633-11	CONNECTOR, FLEXIBLE 30P		
C414	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	CN403	1-575-455-11	WIRE, FLAT TYPE (30 CORE)		
C415	1-163-038-00	CERAMIC CHIP 0.1MF		25V	CN405	1-575-368-11	CONNECTOR, FPC/FFC 14P		
C416	1-126-094-11	ELECT 4.7MF	20%	25V	CN406	*1-566-181-61	PIN, CONNECTOR (PC BOARD) 2P		
C417	1-163-035-00	CERAMIC CHIP 0.047MF		50V	CN407	*1-566-181-21	PIN, CONNECTOR (PC BOARD) 2P		
C418	1-124-438-00	ELECT 1MF	20%	50V	DIODE				
C419	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V	D401	8-719-400-18	DIODE MA152WK		
C420	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V	D409	8-719-200-36	DIODE E10Q504		
C422	1-126-094-11	ELECT 4.7MF	20%	25V	D410	8-719-200-27	DIODE E10DS2		
C424	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V					
C425	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V					

When indicating parts by reference number, please include the board name.



# CM-15

Ref.No	Part No.	Description
D411	8-719-400-18	DIODE MA152WK
D413	8-719-400-18	DIODE MA152WK
D414	8-719-400-18	DIODE MA152WK
D501	8-719-938-75	DIODE SB05-05CP
D502	8-719-938-75	DIODE SB05-05CP
D503	8-719-104-34	DIODE 1S2836
<u>FERRITE BEAD</u>		
FB401	1-543-256-11	BEAD, FERRITE
FB402	1-543-256-11	BEAD, FERRITE
<u>IC</u>		
IC301	8-752-050-54	IC CXA1449Q
IC302	8-759-100-97	IC UPC339G2
IC303	8-759-710-07	IC NJM2234M
IC401	8-752-810-99	IC CXP80116-643Q
IC402	8-759-990-41	IC BU5725F
IC403	8-759-804-72	IC LB1631M
IC404	8-759-107-68	IC CX20115A
IC405	8-759-990-55	IC CXA8006M
IC406	8-759-805-06	IC CXA1127M
IC501	8-759-013-24	IC LM358ML
IC502	8-759-945-17	IC MB3775PF
<u>COIL</u>		
L301	1-407-169-XX	INDUCTOR 100UH
L302	1-408-987-21	INDUCTOR 330UH
L401	1-408-978-21	INDUCTOR 47UH
L402	1-408-978-21	INDUCTOR 47UH
L501	1-424-104-11	COIL, CHOKE 10UH
L502	1-424-106-11	COIL, CHOKE 47UH
L503	1-424-106-11	COIL, CHOKE 47UH
<u>TRANSISTOR</u>		
Q301	8-729-216-22	TRANSISTOR 2SA1162
Q302	8-729-100-66	TRANSISTOR 2SC1623
Q303	8-729-216-22	TRANSISTOR 2SA1162
Q304	8-729-100-66	TRANSISTOR 2SC1623
Q305	8-729-216-22	TRANSISTOR 2SA1162
Q306	8-729-100-66	TRANSISTOR 2SC1623
Q308	8-729-901-01	TRANSISTOR DTC144EK
Q403	8-729-901-06	TRANSISTOR DTA144EK
Q404	8-729-901-06	TRANSISTOR DTA144EK
Q407	8-729-100-66	TRANSISTOR 2SC1623
Q417	8-729-216-22	TRANSISTOR 2SA1162
Q418	8-729-901-01	TRANSISTOR DTC144EK
Q501	8-729-901-01	TRANSISTOR DTC144EK
Q502	8-729-100-66	TRANSISTOR 2SC1623
Q503	8-729-805-25	TRANSISTOR 2SB1121
Q504	8-729-100-66	TRANSISTOR 2SC1623
Q505	8-729-805-25	TRANSISTOR 2SB1121
Q506	8-729-901-01	TRANSISTOR DTC144EK

Remark	Ref.No	Part No.	Description	Remark
	Q507	8-729-901-06	TRANSISTOR DTA144EK	
	Q508	8-729-901-01	TRANSISTOR DTC144EK	
	Q509	8-729-100-66	TRANSISTOR 2SC1623	
	Q510	8-729-100-66	TRANSISTOR 2SC1623	
<u>RESISTOR</u>				
	R301	1-216-041-00	METAL GLAZE 470 5%	1/10W
	R302	1-216-041-00	METAL GLAZE 470 5%	1/10W
	R303	1-216-085-00	METAL GLAZE 33K 5%	1/10W
	R304	1-216-081-00	METAL GLAZE 22K 5%	1/10W
	R305	1-216-045-00	METAL GLAZE 680 5%	1/10W
	R306	1-216-035-00	METAL GLAZE 270 5%	1/10W
	R307	1-216-031-00	METAL GLAZE 180 5%	1/10W
	R308	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
	R309	1-216-081-00	METAL GLAZE 22K 5%	1/10W
	R310	1-216-083-00	METAL GLAZE 27K 5%	1/10W
	R311	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
	R312	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R313	1-216-121-00	METAL GLAZE 1M 5%	1/10W
	R314	1-216-047-00	METAL GLAZE 820 5%	1/10W
	R315	1-216-081-00	METAL GLAZE 22K 5%	1/10W
	R316	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
	R317	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
	R318	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R319	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
	R320	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
	R321	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R322	1-216-085-00	METAL GLAZE 33K 5%	1/10W
	R323	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R325	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R326	1-216-021-00	METAL GLAZE 68 5%	1/10W
	R327	1-216-029-00	METAL GLAZE 150 5%	1/10W
	R328	1-216-093-00	METAL GLAZE 68K 5%	1/10W
	R329	1-216-119-00	METAL GLAZE 820K 5%	1/10W
	R330	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
	R331	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
	R332	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
	R335	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R336	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R339	1-216-097-00	METAL GLAZE 100K 5%	1/10W
	R341	1-216-115-00	METAL GLAZE 560K 5%	1/10W
	R342	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
	R343	1-216-077-00	METAL GLAZE 15K 5%	1/10W
	R350	1-216-121-00	METAL GLAZE 1M 5%	1/10W
	R351	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R352	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R355	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
	R356	1-216-295-00	METAL GLAZE 0 5%	1/10W
	R357	1-216-075-00	METAL GLAZE 12K 5%	1/10W
	R358	1-216-001-00	METAL GLAZE 10 5%	1/10W
	R359	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R360	1-216-121-00	METAL GLAZE 1M 5%	1/10W
	R361	1-216-295-00	METAL GLAZE 0 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R367	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R478	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R368	1-216-013-00	METAL GLAZE	33 5% 1/10W	R479	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R401	1-216-043-00	METAL GLAZE	560 5% 1/10W	R480	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R402	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R482	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R403	1-216-172-00	METAL GLAZE	82 5% 1/8W	R483	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R404	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R484	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R405	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R485	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R406	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R486	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R407	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R489	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R408	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R490	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R409	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R491	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R410	1-216-099-00	METAL GLAZE	120K 5% 1/10W	R492	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R411	1-216-099-00	METAL GLAZE	120K 5% 1/10W	R493	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R412	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R494	1-216-295-00	METAL GLAZE	0 5% 1/10W
R414	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R497	1-216-037-00	METAL GLAZE	330 5% 1/10W
R415	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R498	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R416	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R499	1-216-295-00	METAL GLAZE	0 5% 1/10W
R417	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R501	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R418	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R502	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R419	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R503	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R420	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R504	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R421	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R505	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R423	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R506	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R424	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R507	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R425	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R508	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R426	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R510	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R428	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R511	1-216-033-00	METAL GLAZE	220 5% 1/10W
R429	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R512	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R430	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R513	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R442	1-216-295-00	METAL GLAZE	0 5% 1/10W	R514	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R443	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R515	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R444	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R516	1-216-045-00	METAL GLAZE	680 5% 1/10W
R447	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R517	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R448	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R518	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R449	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R519	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R450	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R520	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R452	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R521	1-216-045-00	METAL GLAZE	680 5% 1/10W
R454	1-216-037-00	METAL GLAZE	330 5% 1/10W	R522	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R456	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R523	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R457	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R524	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R458	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R525	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R462	1-216-295-00	METAL GLAZE	0 5% 1/10W	R527	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R466	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R531	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R468	1-217-671-11	METAL GLAZE	1 5% 1/10W	R532	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R469	1-216-304-11	METAL GLAZE	3.3 5% 1/10W				
R470	1-216-304-11	METAL GLAZE	3.3 5% 1/10W				
R471	1-216-304-11	METAL GLAZE	3.3 5% 1/10W				
R472	1-217-671-11	METAL GLAZE	1 5% 1/10W				
R473	1-217-671-11	METAL GLAZE	1 5% 1/10W				
R474	1-217-671-11	METAL GLAZE	1 5% 1/10W				

When indicating parts by reference number, please include the board name.

**CM-15****RP-74**

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
CRYSTAL				C132	1-124-438-00	ELECT 1MF	20% 50V
X301	1-567-699-11	VIBRATOR, CRYSTAL (5.85MHz)		C133	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
X401	1-577-116-11	VIBRATOR, CRYSTAL (16MHz)		C134	1-163-035-00	CERAMIC CHIP 0.047MF	50V
*****				C139	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*A-7061-808-A RP-74 (A) BOARD, COMPLETE				C140	1-126-157-11	ELECT 10MF	20% 16V
*****				C141	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
CAPACITOR				C142	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C001	1-126-157-11	ELECT 10MF	20% 16V	C143	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C002	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C144	1-126-157-11	ELECT 10MF	20% 16V
C003	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C145	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C004	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C146	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C005	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C147	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C006	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C148	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C007	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C149	1-163-092-00	CERAMIC CHIP 9PF	0.25PF 50V
C008	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C150	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C009	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C151	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C153	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C011	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C154	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V
C021	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V	C160	1-126-157-11	ELECT 10MF	20% 16V
C101	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V	C201	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V
C102	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V	C202	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V
C103	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C203	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C104	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C204	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C105	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V	C205	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V
C106	1-164-222-11	CERAMIC CHIP 0.22MF	25V	C206	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C107	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C207	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C108	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V	C208	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V
C109	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C209	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C110	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C210	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C111	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C211	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C112	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C212	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C113	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C213	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C114	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V	C214	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V
C115	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C215	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C116	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C216	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C117	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C217	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C118	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C218	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C119	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C219	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C120	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V	C220	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V
C121	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C221	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C122	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C222	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C123	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C223	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C124	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C224	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C125	1-124-638-11	ELECT 22MF	20% 6.3V	C225	1-124-638-11	ELECT 22MF	20% 6.3V
C126	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C226	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C127	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C227	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C128	1-124-438-00	ELECT 1MF	20% 50V	C228	1-124-438-00	ELECT 1MF	20% 50V
C129	1-124-638-11	ELECT 22MF	20% 6.3V	C229	1-124-638-11	ELECT 22MF	20% 6.3V
C130	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C230	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C131	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C231	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C232	1-124-438-00	ELECT 1MF	20% 50V
				C233	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
				C239	1-164-232-11	CERAMIC CHIP 0.01MF	50V

When indicating parts by reference number, please include the board name.





# RP-74

# VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R030	1-216-041-00	METAL GLAZE 470 5% 1/10W		R214	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R031	1-216-041-00	METAL GLAZE 470 5% 1/10W		R215	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R033	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		R216	1-216-086-00	METAL GLAZE 36K 5% 1/10W	
R034	1-216-021-00	METAL GLAZE 68 5% 1/10W		R217	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R035	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R218	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R036	1-216-048-00	METAL GLAZE 910 5% 1/10W		R219	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R101	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R220	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R102	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R221	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R103	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R232	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R104	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R233	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R105	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R234	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R106	1-216-091-00	METAL GLAZE 56K 5% 1/10W		R235	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R107	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R236	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R108	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R237	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R109	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W		R238	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R110	1-216-086-00	METAL GLAZE 36K 5% 1/10W		R239	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R111	1-216-085-00	METAL GLAZE 33K 5% 1/10W		R240	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R112	1-216-748-11	METAL GLAZE 39K 5% 1/10W		R241	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R113	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R242	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R114	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R243	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R115	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W		VARIABLE RESISTOR			
R116	1-216-086-00	METAL GLAZE 36K 5% 1/10W		RV101	1-230-719-11	RES, ADJ, CARBON 2.2K	
R117	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		RV102	1-230-719-11	RES, ADJ, CARBON 2.2K	
R118	1-216-035-00	METAL GLAZE 270 5% 1/10W		RV201	1-230-719-11	RES, ADJ, CARBON 2.2K	
R119	1-216-025-00	METAL GLAZE 100 5% 1/10W		RV202	1-230-719-11	RES, ADJ, CARBON 2.2K	
R120	1-216-025-00	METAL GLAZE 100 5% 1/10W		*****			
R121	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		*A-7061-810-A VI-65 (A) BOARD, COMPLETE			
R122	1-216-682-11	METAL CHIP 20K 0.50% 1/10W		*****			
R123	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		CAPACITOR			
R134	1-216-097-00	METAL GLAZE 100K 5% 1/10W		C001	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
R135	1-216-097-00	METAL GLAZE 100K 5% 1/10W		C002	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
R136	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C003	1-163-011-11	CERAMIC CHIP 0.0015MF 10% 50V	
R137	1-216-001-00	METAL GLAZE 10 5% 1/10W		C004	1-163-127-00	CERAMIC CHIP 270PF 5% 50V	
R138	1-216-031-00	METAL GLAZE 180 5% 1/10W		C005	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
R139	1-216-081-00	METAL GLAZE 22K 5% 1/10W		C006	1-124-446-11	ELECT 47MF 20% 10V	
R140	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C008	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
R141	1-216-081-00	METAL GLAZE 22K 5% 1/10W		C009	1-163-115-00	CERAMIC CHIP 82PF 5% 50V	
R142	1-216-001-00	METAL GLAZE 10 5% 1/10W		C010	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
R143	1-216-031-00	METAL GLAZE 180 5% 1/10W		C011	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
R150	1-216-089-00	METAL GLAZE 47K 5% 1/10W		C012	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
R201	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C014	1-124-463-00	ELECT 0.1MF 20% 50V	
R202	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C015	1-124-904-71	ELECT 2.2MF 20% 50V	
R203	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C016	1-164-232-11	CERAMIC CHIP 0.01MF 50V	
R204	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C017	1-163-090-00	CERAMIC CHIP 7PF 0.25% 50V	
R205	1-216-748-11	METAL GLAZE 39K 5% 1/10W		C018	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
R206	1-216-091-00	METAL GLAZE 56K 5% 1/10W		C019	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
R207	1-216-081-00	METAL GLAZE 22K 5% 1/10W		C020	1-124-446-11	ELECT 47MF 20% 10V	
R208	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C021	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
R209	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W		C023	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
R210	1-216-086-00	METAL GLAZE 36K 5% 1/10W		C024	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
R211	1-216-085-00	METAL GLAZE 33K 5% 1/10W					
R212	1-216-748-11	METAL GLAZE 39K 5% 1/10W					
R213	1-216-081-00	METAL GLAZE 22K 5% 1/10W					

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C025	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C125	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C026	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C126	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C027	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C127	1-123-875-11	ELECT 10MF	20% 50V
C028	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C128	1-124-443-00	ELECT 100MF	20% 6.3V
C029	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C129	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C030	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C130	1-123-875-11	ELECT 10MF	20% 50V
C031	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C131	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C032	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C132	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C033	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	C133	1-124-464-11	ELECT 0.22MF	20% 50V
C034	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C134	1-124-446-11	ELECT 47MF	20% 10V
C035	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C135	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C036	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C136	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C037	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C137	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C038	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C138	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C039	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C139	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C040	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C140	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C041	1-123-875-11	ELECT 10MF	20% 50V	C141	1-124-446-11	ELECT 47MF	20% 10V
C042	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C142	1-123-875-11	ELECT 10MF	20% 50V
C043	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C143	1-126-233-11	ELECT 22MF	20% 25V
C044	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C144	1-123-875-11	ELECT 10MF	20% 50V
C045	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C145	1-123-875-11	ELECT 10MF	20% 50V
C046	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C146	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C047	1-123-875-11	ELECT 10MF	20% 50V	C147	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C048	1-123-875-11	ELECT 10MF	20% 50V	C148	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C051	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C149	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C052	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C150	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C053	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C151	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C054	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C160	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C055	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C161	1-216-295-00	METAL GLAZE 0	5% 1/10W
C056	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C162	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C057	1-124-927-11	ELECT 4.7MF	20% 50V	C163	1-163-096-00	CERAMIC CHIP 13PF	5% 50V
C058	1-124-927-11	ELECT 4.7MF	20% 50V	C164	1-124-927-11	ELECT 4.7MF	20% 50V
C059	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C165	1-126-233-11	ELECT 22MF	20% 25V
C060	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C166	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C061	1-123-875-11	ELECT 10MF	20% 50V	C167	1-124-927-11	ELECT 4.7MF	20% 50V
C062	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C168	1-124-927-11	ELECT 4.7MF	20% 50V
C063	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C169	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C064	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C170	1-126-233-11	ELECT 22MF	20% 25V
C065	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C171	1-126-233-11	ELECT 22MF	20% 25V
C100	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C200	1-163-128-00	CERAMIC CHIP 300PF	5% 50V
C101	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C201	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C104	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C202	1-163-128-00	CERAMIC CHIP 300PF	5% 50V
C108	1-163-128-00	CERAMIC CHIP 300PF	5% 50V	C203	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C109	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C204	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C110	1-123-875-11	ELECT 10MF	20% 50V	C205	1-124-904-71	ELECT 2.2MF	20% 50V
C111	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C206	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C112	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C207	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C113	1-163-111-00	CERAMIC CHIP 56PF	5% 50V	C208	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C114	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	C209	1-123-875-11	ELECT 10MF	20% 50V
C118	1-163-091-00	CERAMIC CHIP 8PF	0.25PF 50V	C210	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C120	1-124-896-71	ELECT 33MF	20% 16V	C211	1-216-295-00	METAL GLAZE 0	5% 1/10W
C122	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C212	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C124	1-163-134-00	CERAMIC CHIP 510PF	5% 50V	C213	1-163-133-00	CERAMIC CHIP 470PF	5% 50V

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# VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C214	1-124-927-11	ELECT 4.7MF	20% 50V	C411	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C215	1-123-875-11	ELECT 10MF	20% 50V	C412	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C216	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C413	1-124-443-00	ELECT 100MF	20% 6.3V
C217	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C414	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C218	1-123-875-11	ELECT 10MF	20% 50V	C415	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C301	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C416	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C302	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C417	1-126-233-11	ELECT 22MF	20% 25V
C303	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C418	1-126-233-11	ELECT 22MF	20% 25V
C306	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C419	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C307	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C420	1-123-875-11	ELECT 10MF	20% 50V
C308	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C421	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C309	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C422	1-216-295-00	METAL GLAZE 0	5% 1/10W
C310	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C423	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C313	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C424	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C314	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C425	1-124-925-11	ELECT 2.2MF	20% 50V
C315	1-123-875-11	ELECT 10MF	20% 50V	C426	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C316	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C427	1-124-927-11	ELECT 4.7MF	20% 50V
C317	1-123-875-11	ELECT 10MF	20% 50V	C428	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C318	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C429	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C319	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C430	1-124-925-11	ELECT 2.2MF	20% 50V
C320	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C431	1-124-927-11	ELECT 4.7MF	20% 50V
C321	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C432	1-124-927-11	ELECT 4.7MF	20% 50V
C322	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C500	1-163-096-00	CERAMIC CHIP 13PF	5% 50V
C323	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C501	1-124-446-11	ELECT 47MF	20% 10V
C324	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C502	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C325	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C504	1-124-446-11	ELECT 47MF	20% 10V
C326	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C506	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C327	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C507	1-124-927-11	ELECT 4.7MF	20% 50V
C328	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C508	1-123-875-11	ELECT 10MF	20% 50V
C331	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C509	1-123-875-11	ELECT 10MF	20% 50V
C332	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C510	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C333	1-163-106-00	CERAMIC CHIP 36PF	5% 50V	C512	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C334	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C513	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C335	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C514	1-123-875-11	ELECT 10MF	20% 50V
C336	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C515	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C341	1-163-104-00	CERAMIC CHIP 30PF	5% 50V	C516	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C343	1-123-875-11	ELECT 10MF	20% 50V	C517	1-124-927-11	ELECT 4.7MF	20% 50V
C344	1-123-875-11	ELECT 10MF	20% 50V	C519	1-124-446-11	ELECT 47MF	20% 10V
C345	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C521	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C346	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C522	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C347	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C523	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C348	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	C524	1-123-875-11	ELECT 10MF	20% 50V
C349	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	C525	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C400	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C526	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C401	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C527	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C402	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C528	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C403	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C529	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C404	1-124-927-11	ELECT 4.7MF	20% 50V	C530	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C405	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C531	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C407	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C532	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C408	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C533	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C409	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C534	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C410	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C535	1-124-791-11	ELECT 1MF	20% 50V

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Ref.No	Part No.	Description		Remark	Ref.No	Part No.	Description		Remark
C536	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C812	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C537	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	C813	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C538	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C814	1-123-875-11	ELECT 10MF	20%	50V
C539	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	C815	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C540	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C816	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C541	1-163-261-00	CERAMIC CHIP 270PF	5%	50V	C817	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C601	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C818	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C602	1-163-241-11	CERAMIC CHIP 39PF	5%	50V	C819	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C604	1-163-099-00	CERAMIC CHIP 18PF	5%	50V	C820	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C605	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C821	1-124-925-11	ELECT 2.2MF	20%	50V
C606	1-163-126-00	CERAMIC CHIP 240PF	5%	50V	C822	1-124-925-11	ELECT 2.2MF	20%	50V
C607	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C823	1-163-036-00	CERAMIC CHIP 0.068MF		50V
C608	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C824	1-124-925-11	ELECT 2.2MF	20%	50V
C609	1-123-875-11	ELECT 10MF	20%	50V	C825	1-124-464-11	ELECT 0.22MF	20%	50V
C610	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C826	1-163-033-00	CERAMIC CHIP 0.022MF		50V
C611	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C827	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C620	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C828	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C621	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C829	1-124-463-00	ELECT 0.1MF	20%	50V
C622	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C830	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C623	1-163-100-00	CERAMIC CHIP 20PF	5%	50V	C831	1-124-252-00	ELECT 0.33MF	20%	50V
C700	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C832	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C701	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C833	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C702	1-163-118-00	CERAMIC CHIP 110PF	5%	50V	C834	1-163-108-00	CERAMIC CHIP 43PF	5%	50V
C703	1-123-875-11	ELECT 10MF	20%	50V	C836	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C704	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C837	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C705	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C838	1-163-033-00	CERAMIC CHIP 0.022MF		50V
C706	1-163-007-11	CERAMIC CHIP 680PF	10%	50V	C839	1-124-927-11	ELECT 4.7MF	20%	50V
C708	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C840	1-131-358-00	TANTALUM 6.8MF	10%	25V
C709	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C841	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C710	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	C842	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	
C711	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C843	1-123-875-11	ELECT 10MF	20%	50V
C712	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C844	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C713	1-123-382-00	ELECT 3.3MF	20%	50V	C846	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C714	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C847	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C715	1-124-925-11	ELECT 2.2MF	20%	50V	C848	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C716	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	C849	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C717	1-163-241-11	CERAMIC CHIP 39PF	5%	50V	C851	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C720	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C852	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C722	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C853	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C730	1-163-126-00	CERAMIC CHIP 240PF	5%	50V	C854	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C731	1-163-124-00	CERAMIC CHIP 200PF	5%	50V	C855	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C800	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C856	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C801	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	C857	1-124-443-00	ELECT 100MF	20%	6.3V
C802	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C858	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C803	1-163-111-00	CERAMIC CHIP 56PF	5%	50V	C859	1-123-875-11	ELECT 10MF	20%	50V
C804	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C860	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C805	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C863	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C806	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C866	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C807	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V	C867	1-163-099-00	CERAMIC CHIP 18PF	5%	50V
C808	1-216-295-00	METAL GLAZE 0	5%	1/10W	C868	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C809	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C869	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C810	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C870	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C811	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C871	1-163-036-00	CERAMIC CHIP 0.068MF		50V

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C901	1-126-233-11	ELECT 22MF	20% 25V	DL400	1-415-518-31	DELAY LINE, DUAL 1H-2H	
C902	1-163-105-00	CERAMIC CHIP 33PF	5% 50V				
C903	1-163-109-00	CERAMIC CHIP 47PF	5% 50V				
C904	1-163-103-00	CERAMIC CHIP 27PF	5% 50V				
C905	1-124-925-11	ELECT 2.2MF	20% 50V				
		<u>CONNECTOR</u>				<u>FILTER</u>	
CN001	1-568-082-11	CONNECTOR (RECEPTALE) 26P		FL001	1-409-397-11	TRAP	
CN002	1-568-080-11	CONNECTOR (RECEPTALE) 22P		FL100	1-236-540-11	LPF (DEM0D OUT)	
CN003	1-506-475-11	PIN, CONNECTOR 10P		FL101	1-236-539-11	LPF (REC Y)	
		<u>TRIMMER</u>		FL700	1-235-633-11	BPF	
CV800	1-141-227-00	CAP, CERAMIC TRIMMER		FL701	1-235-632-11	BPF	
		<u>DIODE</u>					
D001	8-719-400-18	DIODE MA152WK		FL800	1-409-396-11	REC C TRAP	
D002	8-719-800-76	DIODE 1SS226		FL801	1-236-538-11	BPF	
D003	8-719-400-18	DIODE MA152WK		FL802	1-409-394-11	TRAP, CHROMA EMPHASIS	
D004	8-719-400-18	DIODE MA152WK					
D005	8-719-400-18	DIODE MA152WK				<u>IC</u>	
D006	8-719-400-18	DIODE MA152WK		IC001	8-759-209-17	IC TA8607F	
D007	8-719-800-76	DIODE 1SS226		IC002	8-759-925-60	IC BA401	
D008	8-719-400-18	DIODE MA152WK		IC003	8-759-927-52	IC BA7036LS	
D009	8-719-400-18	DIODE MA152WK		IC100	8-752-003-00	IC CX20030	
D100	8-719-104-34	DIODE 1S2836		IC101	8-759-710-09	IC NJM2233AM	
D101	8-719-400-18	DIODE MA152WK		IC200	8-752-031-01	IC CXA1047M	
D102	8-719-400-18	DIODE MA152WK		IC301	8-759-012-00	IC MC10H116M	
D200	8-719-400-18	DIODE MA152WK		IC302	8-759-009-06	IC MC14052BF	
D201	8-719-400-18	DIODE MA152WK		IC400	8-752-003-12	IC CX20031	
D202	8-719-400-18	DIODE MA152WK		IC500	8-759-925-60	IC BA401	
D203	8-719-400-18	DIODE MA152WK		IC700	8-759-202-67	IC CX20117	
D300	8-719-400-18	DIODE MA152WK		IC800	8-752-924-94	IC CX22021	
D301	8-719-400-18	DIODE MA152WK		IC801	8-752-003-22	IC CX20032	
D302	8-719-400-18	DIODE MA152WK		IC802	8-759-914-56	IC CX23054	
D303	8-719-400-18	DIODE MA152WK		IC900	8-749-920-43	IC SI-3050CA	
D400	8-719-800-76	DIODE 1SS226				<u>COIL</u>	
D401	8-719-400-18	DIODE MA152WK		L001	1-410-072-21	INDUCTOR 820UH	
D402	8-719-400-18	DIODE MA152WK		L002	1-408-985-21	INDUCTOR 180UH	
D404	8-719-400-18	DIODE MA152WK		L003	1-408-968-21	INDUCTOR 6.8UH	
D500	8-719-800-76	DIODE 1SS226		L004	1-408-963-11	INDUCTOR 2.7UH	
D501	8-719-400-18	DIODE MA152WK		L005	1-408-968-21	INDUCTOR 6.8UH	
D502	8-719-800-76	DIODE 1SS226		L006	1-408-969-21	INDUCTOR 8.2UH	
D503	8-719-800-76	DIODE 1SS226		L008	1-408-973-21	INDUCTOR 18UH	
D504	8-719-400-18	DIODE MA152WK		L009	1-408-989-21	INDUCTOR 470UH	
D700	8-719-400-18	DIODE MA152WK		L010	1-408-989-21	INDUCTOR 470UH	
D701	8-719-400-18	DIODE MA152WK		L011	1-408-970-21	INDUCTOR 10UH	
D702	8-719-800-76	DIODE 1SS226		L012	1-408-972-21	INDUCTOR 15UH	
D703	8-719-800-76	DIODE 1SS226		L013	1-408-973-21	INDUCTOR 18UH	
D704	8-719-400-18	DIODE MA152WK		L014	1-408-976-21	INDUCTOR 33UH	
D800	8-719-800-76	DIODE 1SS226		L015	1-408-970-21	INDUCTOR 10UH	
		<u>DELAY LINE</u>		L016	1-408-970-21	INDUCTOR 10UH	
DL400	1-415-517-31	DELAY LINE, DUAL 1H-2H		L017	1-408-974-21	INDUCTOR 22UH	
				L100	1-408-966-21	INDUCTOR 4.7UH	
				L102	1-408-967-21	INDUCTOR 5.6UH	
				L104	1-408-975-21	INDUCTOR 27UH	
				L105	1-408-984-21	INDUCTOR 150UH	
				L106	1-408-964-21	INDUCTOR 3.3UH	
				L107	1-408-983-21	INDUCTOR 120UH	
				L109	1-408-970-21	INDUCTOR 10UH	

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
L110	1-408-970-21	INDUCTOR	10UH	Q018	8-729-901-01	TRANSISTOR DTC144EK	
L120	1-408-977-21	INDUCTOR	39UH	Q019	8-729-100-66	TRANSISTOR 2SC1623	
L122	1-407-169-XX	INDUCTOR	100UH	Q020	8-729-202-38	TRANSISTOR 2SC3326N	
L201	1-407-169-XX	INDUCTOR	100UH	Q021	8-729-100-66	TRANSISTOR 2SC1623	
L301	1-408-984-21	INDUCTOR	150UH	Q022	8-729-100-66	TRANSISTOR 2SC1623	
L302	1-408-987-21	INDUCTOR	330UH	Q023	8-729-100-66	TRANSISTOR 2SC1623	
L305	1-408-969-21	INDUCTOR	8.2UH	Q024	8-729-100-66	TRANSISTOR 2SC1623	
L310	1-408-948-00	INDUCTOR	220UH	Q025	8-729-100-66	TRANSISTOR 2SC1623	
L311	1-408-970-21	INDUCTOR	10UH	Q026	8-729-901-06	TRANSISTOR DTA144EK	
L312	1-408-970-21	INDUCTOR	10UH	Q027	8-729-901-06	TRANSISTOR DTA144EK	
L400	1-408-987-21	INDUCTOR	330UH	Q029	8-729-100-66	TRANSISTOR 2SC1623	
L401	1-408-970-21	INDUCTOR	10UH	Q030	8-729-100-66	TRANSISTOR 2SC1623	
L402	1-408-969-21	INDUCTOR	8.2UH	Q031	8-729-100-66	TRANSISTOR 2SC1623	
L403	1-408-958-21	INDUCTOR	1UH	Q032	8-729-216-22	TRANSISTOR 2SA1162	
L404	1-408-958-21	INDUCTOR	1UH	Q033	8-729-100-66	TRANSISTOR 2SC1623	
L405	1-408-974-21	INDUCTOR	22UH	Q034	8-729-216-22	TRANSISTOR 2SA1162	
L407	1-408-974-21	INDUCTOR	22UH	Q035	8-729-216-22	TRANSISTOR 2SA1162	
L501	1-408-976-21	INDUCTOR	33UH	Q036	8-729-100-66	TRANSISTOR 2SC1623	
L503	1-408-976-21	INDUCTOR	33UH	Q038	8-729-100-66	TRANSISTOR 2SC1623	
L504	1-408-976-21	INDUCTOR	33UH	Q039	8-729-216-22	TRANSISTOR 2SA1162	
L505	1-408-977-21	INDUCTOR	39UH	Q040	8-729-100-66	TRANSISTOR 2SC1623	
L506	1-408-974-21	INDUCTOR	22UH	Q100	8-729-100-66	TRANSISTOR 2SC1623	
L601	1-408-976-21	INDUCTOR	33UH	Q101	8-729-100-66	TRANSISTOR 2SC1623	
L603	1-408-976-21	INDUCTOR	33UH	Q102	8-729-100-66	TRANSISTOR 2SC1623	
L700	1-408-974-21	INDUCTOR	22UH	Q103	8-729-216-22	TRANSISTOR 2SA1162	
L701	1-408-980-21	INDUCTOR	68UH	Q104	8-729-100-66	TRANSISTOR 2SC1623	
L800	1-407-169-XX	INDUCTOR	100UH	Q106	8-729-100-66	TRANSISTOR 2SC1623	
L801	1-408-983-21	INDUCTOR	120UH	Q107	8-729-901-01	TRANSISTOR DTC144EK	
L802	1-408-985-21	INDUCTOR	180UH	Q108	8-729-100-66	TRANSISTOR 2SC1623	
L803	1-408-974-21	INDUCTOR	22UH	Q109	8-729-901-06	TRANSISTOR DTA144EK	
L804	1-408-948-00	INDUCTOR	220UH	Q110	8-729-216-22	TRANSISTOR 2SA1162	
L807	1-408-973-21	INDUCTOR	18UH	Q111	8-729-100-66	TRANSISTOR 2SC1623	
L901	1-408-976-21	INDUCTOR	33UH	Q112	8-729-100-66	TRANSISTOR 2SC1623	
<u>VARIABLE COIL</u>				Q113	8-729-100-66	TRANSISTOR 2SC1623	
LV400	1-408-512-00	COIL (VARIABLE)		Q114	8-729-901-01	TRANSISTOR DTC144EK	
<u>TRANSISTOR</u>				Q116	8-729-100-66	TRANSISTOR 2SC1623	
Q001	8-729-100-66	TRANSISTOR 2SC1623		Q117	8-729-100-66	TRANSISTOR 2SC1623	
Q002	8-729-620-06	TRANSISTOR 2SC3052EF		Q118	8-729-216-22	TRANSISTOR 2SA1162	
Q003	8-729-100-66	TRANSISTOR 2SC1623		Q119	8-729-901-01	TRANSISTOR DTC144EK	
Q004	8-729-100-66	TRANSISTOR 2SC1623		Q120	8-729-113-31	TRANSISTOR 2SB733-2	
Q005	8-729-100-66	TRANSISTOR 2SC1623		Q121	8-729-901-01	TRANSISTOR DTC144EK	
Q006	8-729-901-06	TRANSISTOR DTA144EK		Q122	8-729-901-01	TRANSISTOR DTC144EK	
Q007	8-729-901-01	TRANSISTOR DTC144EK		Q123	8-729-100-66	TRANSISTOR 2SC1623	
Q008	8-729-901-01	TRANSISTOR DTC144EK		Q124	8-729-216-22	TRANSISTOR 2SA1162	
Q009	8-729-901-01	TRANSISTOR DTC144EK		Q125	8-729-216-22	TRANSISTOR 2SA1162	
Q011	8-729-901-01	TRANSISTOR DTC144EK		Q126	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q012	8-729-901-01	TRANSISTOR DTC144EK		Q127	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q014	8-729-100-66	TRANSISTOR 2SC1623		Q128	8-729-901-01	TRANSISTOR DTC144EK	
Q015	8-729-216-22	TRANSISTOR 2SA1162		Q129	8-729-216-22	TRANSISTOR 2SA1162	
Q016	8-729-216-22	TRANSISTOR 2SA1162		Q130	8-729-901-01	TRANSISTOR DTC144EK	
Q017	8-729-901-01	TRANSISTOR DTC144EK		Q131	8-729-901-06	TRANSISTOR DTA144EK	
				Q132	8-729-901-06	TRANSISTOR DTA144EK	
				Q133	8-729-216-22	TRANSISTOR 2SA1162	

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q134	8-729-901-01	TRANSISTOR DTC144EK		Q337	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q135	8-729-901-06	TRANSISTOR DTA144EK		Q338	8-729-901-01	TRANSISTOR DTC144EK	
Q136	8-729-901-01	TRANSISTOR DTC144EK		Q339	8-729-901-06	TRANSISTOR DTA144EK	
Q140	8-729-901-01	TRANSISTOR DTC144EK		Q400	8-729-100-66	TRANSISTOR 2SC1623	
Q200	8-729-202-38	TRANSISTOR 2SC3326N		Q401	8-729-216-22	TRANSISTOR 2SA1162	
Q201	8-729-202-38	TRANSISTOR 2SC3326N		Q402	8-729-100-66	TRANSISTOR 2SC1623	
Q202	8-729-901-01	TRANSISTOR DTC144EK		Q404	8-729-901-01	TRANSISTOR DTC144EK	
Q203	8-729-901-06	TRANSISTOR DTA144EK		Q405	8-729-901-01	TRANSISTOR DTC144EK	
Q204	8-729-901-01	TRANSISTOR DTC144EK		Q406	8-729-901-06	TRANSISTOR DTA144EK	
Q205	8-729-901-01	TRANSISTOR DTC144EK		Q407	8-729-901-01	TRANSISTOR DTC144EK	
Q206	8-729-901-01	TRANSISTOR DTC144EK		Q416	8-729-901-01	TRANSISTOR DTC144EK	
Q207	8-729-216-22	TRANSISTOR 2SA1162		Q417	8-729-901-01	TRANSISTOR DTC144EK	
Q208	8-729-216-22	TRANSISTOR 2SA1162		Q418	8-729-901-01	TRANSISTOR DTC144EK	
Q209	8-729-100-66	TRANSISTOR 2SC1623		Q419	8-729-901-06	TRANSISTOR DTA144EK	
Q210	8-729-100-66	TRANSISTOR 2SC1623		Q500	8-729-901-06	TRANSISTOR DTA144EK	
Q211	8-729-901-01	TRANSISTOR DTC144EK		Q501	8-729-100-66	TRANSISTOR 2SC1623	
Q212	8-729-901-01	TRANSISTOR DTC144EK		Q502	8-729-100-66	TRANSISTOR 2SC1623	
Q213	8-729-901-06	TRANSISTOR DTA144EK		Q503	8-729-100-66	TRANSISTOR 2SC1623	
Q214	8-729-216-22	TRANSISTOR 2SA1162		Q504	8-729-100-66	TRANSISTOR 2SC1623	
Q215	8-729-901-01	TRANSISTOR DTC144EK		Q505	8-729-901-06	TRANSISTOR DTA144EK	
Q220	8-729-901-01	TRANSISTOR DTC144EK		Q506	8-729-100-66	TRANSISTOR 2SC1623	
Q221	8-729-100-66	TRANSISTOR 2SC1623		Q507	8-729-216-22	TRANSISTOR 2SA1162	
Q222	8-729-100-66	TRANSISTOR 2SC1623		Q508	8-729-100-66	TRANSISTOR 2SC1623	
Q224	8-729-901-01	TRANSISTOR DTC144EK		Q509	8-729-100-66	TRANSISTOR 2SC1623	
Q225	8-729-901-01	TRANSISTOR DTC144EK		Q510	8-729-216-22	TRANSISTOR 2SA1162	
Q226	8-729-901-01	TRANSISTOR DTC144EK		Q511	8-729-216-22	TRANSISTOR 2SA1162	
Q227	8-729-901-06	TRANSISTOR DTA144EK		Q512	8-729-901-06	TRANSISTOR DTA144EK	
Q301	8-729-901-01	TRANSISTOR DTC144EK		Q513	8-729-901-06	TRANSISTOR DTA144EK	
Q302	8-729-901-01	TRANSISTOR DTC144EK		Q514	8-729-100-66	TRANSISTOR 2SC1623	
Q303	8-729-901-01	TRANSISTOR DTC144EK		Q515	8-729-100-66	TRANSISTOR 2SC1623	
Q313	8-729-901-01	TRANSISTOR DTC144EK		Q518	8-729-901-01	TRANSISTOR DTC144EK	
Q314	8-729-901-06	TRANSISTOR DTA144EK		Q519	8-729-901-01	TRANSISTOR DTC144EK	
Q315	8-729-901-01	TRANSISTOR DTC144EK		Q520	8-729-901-01	TRANSISTOR DTC144EK	
Q316	8-729-901-06	TRANSISTOR DTA144EK		Q521	8-729-100-66	TRANSISTOR 2SC1623	
Q317	8-729-901-01	TRANSISTOR DTC144EK		Q522	8-729-901-06	TRANSISTOR DTA144EK	
Q318	8-729-901-01	TRANSISTOR DTC144EK		Q523	8-729-901-06	TRANSISTOR DTA144EK	
Q319	8-729-100-66	TRANSISTOR 2SC1623		Q524	8-729-901-01	TRANSISTOR DTC144EK	
Q321	8-729-901-01	TRANSISTOR DTC144EK		Q525	8-729-901-06	TRANSISTOR DTA144EK	
Q322	8-729-100-66	TRANSISTOR 2SC1623		Q526	8-729-100-66	TRANSISTOR 2SC1623	
Q323	8-729-901-01	TRANSISTOR DTC144EK		Q527	8-729-100-66	TRANSISTOR 2SC1623	
Q324	8-729-216-22	TRANSISTOR 2SA1162		Q528	8-729-100-66	TRANSISTOR 2SC1623	
Q325	8-729-901-01	TRANSISTOR DTC144EK		Q529	8-729-901-01	TRANSISTOR DTC144EK	
Q326	8-729-901-01	TRANSISTOR DTC144EK		Q530	8-729-901-01	TRANSISTOR DTC144EK	
Q327	8-729-100-66	TRANSISTOR 2SC1623		Q531	8-729-100-66	TRANSISTOR 2SC1623	
Q328	8-729-100-66	TRANSISTOR 2SC1623		Q532	8-729-901-01	TRANSISTOR DTC144EK	
Q329	8-729-901-06	TRANSISTOR DTA144EK		Q533	8-729-100-66	TRANSISTOR 2SC1623	
Q330	8-729-901-06	TRANSISTOR DTA144EK		Q534	8-729-901-06	TRANSISTOR DTA144EK	
Q331	8-729-102-07	TRANSISTOR 2SC2223-F13		Q535	8-729-901-01	TRANSISTOR DTC144EK	
Q332	8-729-102-07	TRANSISTOR 2SC2223-F13		Q536	8-729-901-01	TRANSISTOR DTC144EK	
Q333	8-729-216-22	TRANSISTOR 2SA1162		Q537	8-729-901-06	TRANSISTOR DTA144EK	
Q334	8-729-216-22	TRANSISTOR 2SA1162		Q538	8-729-901-06	TRANSISTOR DTA144EK	
Q335	8-729-102-07	TRANSISTOR 2SC2223-F13		Q539	8-729-901-01	TRANSISTOR DTC144EK	
Q336	8-729-102-07	TRANSISTOR 2SC2223-F13		Q601	8-729-100-66	TRANSISTOR 2SC1623	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q602	8-729-100-66	TRANSISTOR 2SC1623		R014	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q603	8-729-901-01	TRANSISTOR DTC144EK		R015	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q604	8-729-100-66	TRANSISTOR 2SC1623		R016	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q605	8-729-100-66	TRANSISTOR 2SC1623		R017	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q607	8-729-907-46	TRANSISTOR 1M21		R018	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q608	8-729-903-10	TRANSISTOR FMW1		R020	1-216-035-00	METAL GLAZE 270 5%	1/10W
Q609	8-729-901-01	TRANSISTOR DTC144EK		R021	1-216-035-00	METAL GLAZE 270 5%	1/10W
Q610	8-729-216-22	TRANSISTOR 2SA1162		R024	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q611	8-729-901-06	TRANSISTOR DTA144EK		R025	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q612	8-729-100-66	TRANSISTOR 2SC1623		R026	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q613	8-729-100-66	TRANSISTOR 2SC1623		R027	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q614	8-729-901-01	TRANSISTOR DTC144EK		R028	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q700	8-729-901-01	TRANSISTOR DTC144EK		R029	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q701	8-729-100-66	TRANSISTOR 2SC1623		R030	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q702	8-729-100-66	TRANSISTOR 2SC1623		R031	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q704	8-729-100-66	TRANSISTOR 2SC1623		R032	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q705	8-729-216-22	TRANSISTOR 2SA1162		R040	1-216-045-00	METAL GLAZE 680 5%	1/10W
Q706	8-729-216-22	TRANSISTOR 2SA1162		R041	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q800	8-729-100-66	TRANSISTOR 2SC1623		R042	1-216-089-00	METAL GLAZE 47K 5%	1/10W
Q801	8-729-100-66	TRANSISTOR 2SC1623		R043	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
Q802	8-729-216-22	TRANSISTOR 2SA1162		R044	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q803	8-729-202-38	TRANSISTOR 2SC3326N		R045	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q804	8-729-100-66	TRANSISTOR 2SC1623		R046	1-216-748-11	METAL GLAZE 39K 5%	1/10W
Q805	8-729-901-01	TRANSISTOR DTC144EK		R048	1-216-075-00	METAL GLAZE 12K 5%	1/10W
Q806	8-729-100-66	TRANSISTOR 2SC1623		R049	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q807	8-729-216-22	TRANSISTOR 2SA1162		R050	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q808	8-729-216-22	TRANSISTOR 2SA1162		R051	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q809	8-729-100-66	TRANSISTOR 2SC1623		R052	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q810	8-729-100-66	TRANSISTOR 2SC1623		R053	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q811	8-729-901-01	TRANSISTOR DTC144EK		R054	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q812	8-729-901-01	TRANSISTOR DTC144EK		R055	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q813	8-729-100-66	TRANSISTOR 2SC1623		R056	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q815	8-729-901-01	TRANSISTOR DTC144EK		R058	1-216-047-00	METAL GLAZE 820 5%	1/10W
Q816	8-729-901-01	TRANSISTOR DTC144EK		R059	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q817	8-729-901-01	TRANSISTOR DTC144EK		R060	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q818	8-729-901-01	TRANSISTOR DTC144EK		R061	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q901	8-729-100-66	TRANSISTOR 2SC1623		R062	1-216-083-00	METAL GLAZE 27K 5%	1/10W
Q902	8-729-216-22	TRANSISTOR 2SA1162		R063	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
<u>RESISTOR</u>				R064	1-216-295-00	METAL GLAZE 0 5%	1/10W
R001	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R065	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R002	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R066	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R003	1-216-047-00	METAL GLAZE 820 5%	1/10W	R067	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R004	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R068	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R005	1-216-039-00	METAL GLAZE 390 5%	1/10W	R069	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R006	1-216-033-00	METAL GLAZE 220 5%	1/10W	R070	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R007	1-216-037-00	METAL GLAZE 330 5%	1/10W	R074	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R008	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R075	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R009	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R076	1-216-029-00	METAL GLAZE 150 5%	1/10W
R010	1-216-029-00	METAL GLAZE 150 5%	1/10W	R077	1-216-047-00	METAL GLAZE 820 5%	1/10W
R011	1-216-041-00	METAL GLAZE 470 5%	1/10W	R078	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R012	1-216-035-00	METAL GLAZE 270 5%	1/10W	R079	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R013	1-216-043-00	METAL GLAZE 560 5%	1/10W	R080	1-216-081-00	METAL GLAZE 22K 5%	1/10W
				R081	1-216-045-00	METAL GLAZE 680 5%	1/10W

When indicating parts by reference number, please include the board name.

# VI-65

Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R082	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R141	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R083	1-216-085-00	METAL GLAZE	33K	5%	1/10W	R142	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R084	1-216-079-00	METAL GLAZE	18K	5%	1/10W	R143	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R085	1-216-085-00	METAL GLAZE	33K	5%	1/10W	R144	1-216-043-00	METAL GLAZE	560	5%	1/10W
R086	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R145	1-216-043-00	METAL GLAZE	560	5%	1/10W
R087	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R146	1-216-041-00	METAL GLAZE	470	5%	1/10W
R088	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R148	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R089	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R150	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R090	1-216-085-00	METAL GLAZE	33K	5%	1/10W	R151	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R091	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R152	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R092	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R153	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R093	1-216-043-00	METAL GLAZE	560	5%	1/10W	R154	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R094	1-216-295-00	METAL GLAZE	0	5%	1/10W	R155	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R095	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	R156	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R096	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R157	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R097	1-216-041-00	METAL GLAZE	470	5%	1/10W	R158	1-216-035-00	METAL GLAZE	270	5%	1/10W
R098	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R159	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R100	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R160	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R101	1-216-083-00	METAL GLAZE	27K	5%	1/10W	R161	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R102	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R162	1-216-041-00	METAL GLAZE	470	5%	1/10W
R103	1-216-043-00	METAL GLAZE	560	5%	1/10W	R163	1-216-041-00	METAL GLAZE	470	5%	1/10W
R104	1-216-033-00	METAL GLAZE	220	5%	1/10W	R164	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R105	1-216-032-00	METAL GLAZE	200	5%	1/10W	R165	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R106	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R166	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R107	1-216-295-00	METAL GLAZE	0	5%	1/10W	R167	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R108	1-216-031-00	METAL GLAZE	180	5%	1/10W	R168	1-216-033-00	METAL GLAZE	220	5%	1/10W
R109	1-216-041-00	METAL GLAZE	470	5%	1/10W	R169	1-216-047-00	METAL GLAZE	820	5%	1/10W
R111	1-216-295-00	METAL GLAZE	0	5%	1/10W	R170	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R112	1-216-041-00	METAL GLAZE	470	5%	1/10W	R171	1-216-038-00	METAL GLAZE	360	5%	1/10W
R114	1-216-033-00	METAL GLAZE	220	5%	1/10W	R172	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R115	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R173	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R116	1-218-140-11	METAL GLAZE	390	1%	1/10W	R174	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R117	1-218-150-11	METAL GLAZE	1.2K	1%	1/10W	R175	1-218-132-11	METAL GLAZE	4.7K	1%	1/10W
R118	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R176	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R119	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R177	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R120	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R178	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R122	1-216-019-00	METAL GLAZE	56	5%	1/10W	R179	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R123	1-216-045-00	METAL GLAZE	680	5%	1/10W	R180	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R124	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R181	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R125	1-216-083-00	METAL GLAZE	27K	5%	1/10W	R182	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R126	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R183	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R127	1-216-043-00	METAL GLAZE	560	5%	1/10W	R184	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R129	1-216-033-00	METAL GLAZE	220	5%	1/10W	R185	1-216-033-00	METAL GLAZE	220	5%	1/10W
R130	1-216-017-00	METAL GLAZE	47	5%	1/10W	R186	1-216-043-00	METAL GLAZE	560	5%	1/10W
R131	1-216-033-00	METAL GLAZE	220	5%	1/10W	R187	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R132	1-216-295-00	METAL GLAZE	0	5%	1/10W	R188	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R133	1-216-295-00	METAL GLAZE	0	5%	1/10W	R189	1-216-037-00	METAL GLAZE	330	5%	1/10W
R135	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R190	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R136	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R191	1-216-043-00	METAL GLAZE	560	5%	1/10W
R137	1-216-083-00	METAL GLAZE	27K	5%	1/10W	R193	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R138	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R194	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R139	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R195	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R140	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R196	1-216-089-00	METAL GLAZE	47K	5%	1/10W

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Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R197	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R266	1-216-068-00	METAL GLAZE	6.2K	5%	1/10W
R198	1-216-041-00	METAL GLAZE	470	5%	1/10W	R268	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R200	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R269	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R201	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R271	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R202	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R272	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R203	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R273	1-218-140-11	METAL GLAZE	390	1%	1/10W
R204	1-218-142-11	METAL GLAZE	470	1%	1/10W	R301	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R205	1-218-140-11	METAL GLAZE	390	1%	1/10W	R302	1-216-076-00	METAL GLAZE	13K	5%	1/10W
R206	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R303	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R207	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R304	1-216-076-00	METAL GLAZE	13K	5%	1/10W
R208	1-218-150-11	METAL GLAZE	1.2K	1%	1/10W	R305	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R209	1-216-061-00	METAL GLAZE	3.3K	1%	1/10W	R306	1-216-076-00	METAL GLAZE	13K	5%	1/10W
R210	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R307	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R211	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R308	1-216-076-00	METAL GLAZE	13K	5%	1/10W
R212	1-218-132-11	METAL GLAZE	4.7K	1%	1/10W	R310	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R213	1-216-075-00	METAL GLAZE	12K	5%	1/10W	R311	1-216-033-00	METAL GLAZE	220	5%	1/10W
R214	1-216-328-11	METAL GLAZE	4.3K	1%	1/10W	R314	1-216-041-00	METAL GLAZE	470	5%	1/10W
R215	1-218-155-11	METAL GLAZE	3.9K	1%	1/10W	R315	1-216-295-00	METAL GLAZE	0	5%	1/10W
R216	1-218-155-11	METAL GLAZE	3.9K	1%	1/10W	R316	1-216-033-00	METAL GLAZE	220	5%	1/10W
R217	1-216-748-11	METAL GLAZE	39K	5%	1/10W	R330	1-216-041-00	METAL GLAZE	470	5%	1/10W
R218	1-216-103-00	METAL GLAZE	180K	5%	1/10W	R331	1-216-041-00	METAL GLAZE	470	5%	1/10W
R223	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R332	1-216-041-00	METAL GLAZE	470	5%	1/10W
R224	1-216-061-00	METAL GLAZE	3.3K	1%	1/10W	R333	1-216-295-00	METAL GLAZE	0	5%	1/10W
R225	1-218-132-11	METAL GLAZE	4.7K	1%	1/10W	R334	1-216-295-00	METAL GLAZE	0	5%	1/10W
R226	1-218-152-11	METAL GLAZE	1.5K	1%	1/10W	R335	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R227	1-216-748-11	METAL GLAZE	39K	5%	1/10W	R336	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R228	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R337	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R229	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R338	1-216-041-00	METAL GLAZE	470	5%	1/10W
R230	1-216-748-11	METAL GLAZE	39K	5%	1/10W	R339	1-216-041-00	METAL GLAZE	470	5%	1/10W
R231	1-216-075-00	METAL GLAZE	12K	5%	1/10W	R342	1-216-041-00	METAL GLAZE	470	5%	1/10W
R232	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R343	1-216-047-00	METAL GLAZE	820	5%	1/10W
R233	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R344	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R235	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	R345	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R236	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R346	1-216-035-00	METAL GLAZE	270	5%	1/10W
R237	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R347	1-216-041-00	METAL GLAZE	470	5%	1/10W
R238	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R348	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R239	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	R349	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R240	1-216-041-00	METAL GLAZE	470	5%	1/10W	R350	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R241	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R351	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R242	1-216-111-00	METAL GLAZE	390K	5%	1/10W	R352	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R243	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R353	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R244	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R354	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R245	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R355	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R246	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R356	1-216-041-00	METAL GLAZE	470	5%	1/10W
R247	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	R359	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R248	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R360	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R249	1-216-045-00	METAL GLAZE	680	5%	1/10W	R361	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R250	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R362	1-216-041-00	METAL GLAZE	470	5%	1/10W
R251	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	R363	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R252	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R364	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R253	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R365	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R262	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R366	1-216-050-00	METAL GLAZE	1.1K	5%	1/10W
R265	1-216-084-00	METAL GLAZE	30K	5%	1/10W	R368	1-216-047-00	METAL GLAZE	820	5%	1/10W

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R369	1-216-042-00	METAL GLAZE 510 5%	1/10W	R433	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R370	1-216-056-00	METAL GLAZE 2K 5%	1/10W	R434	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R371	1-216-045-00	METAL GLAZE 680 5%	1/10W	R435	1-216-039-00	METAL GLAZE 390 5%	1/10W
R372	1-216-041-00	METAL GLAZE 470 5%	1/10W	R436	1-216-748-11	METAL GLAZE 39K 5%	1/10W
R373	1-216-039-00	METAL GLAZE 390 5%	1/10W	R437	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R374	1-216-041-00	METAL GLAZE 470 5%	1/10W	R438	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R375	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R439	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R376	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R440	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R377	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R441	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R379	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R442	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R380	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R443	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R383	1-216-295-00	METAL GLAZE 0 5%	1/10W	R444	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R384	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R445	1-216-045-00	METAL GLAZE 680 5%	1/10W
R385	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R446	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R386	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R447	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R387	1-216-041-00	METAL GLAZE 470 5%	1/10W	R460	1-216-295-00	METAL GLAZE 0 5%	1/10W
R388	1-216-041-00	METAL GLAZE 470 5%	1/10W	R461	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R389	1-216-295-00	METAL GLAZE 0 5%	1/10W	R462	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R390	1-216-041-00	METAL GLAZE 470 5%	1/10W	R463	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R391	1-216-035-00	METAL GLAZE 270 5%	1/10W	R466	1-216-025-00	METAL GLAZE 100 5%	1/10W
R392	1-216-295-00	METAL GLAZE 0 5%	1/10W	R477	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R393	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R478	1-216-295-00	METAL GLAZE 0 5%	1/10W
R394	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R479	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R395	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R501	1-216-043-00	METAL GLAZE 560 5%	1/10W
R397	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R502	1-216-041-00	METAL GLAZE 470 5%	1/10W
R400	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R503	1-216-295-00	METAL GLAZE 0 5%	1/10W
R401	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R504	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R402	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R505	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R403	1-216-035-00	METAL GLAZE 270 5%	1/10W	R506	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R404	1-216-013-00	METAL GLAZE 33 5%	1/10W	R507	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R405	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R508	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R406	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R510	1-216-045-00	METAL GLAZE 680 5%	1/10W
R407	1-216-111-00	METAL GLAZE 390K 5%	1/10W	R511	1-216-045-00	METAL GLAZE 680 5%	1/10W
R408	1-216-093-00	METAL GLAZE 68K 5%	1/10W	R512	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R409	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W	R513	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R410	1-216-035-00	METAL GLAZE 270 5%	1/10W	R514	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R411	1-216-027-00	METAL GLAZE 120 5%	1/10W	R515	1-216-043-00	METAL GLAZE 560 5%	1/10W
R414	1-216-039-00	METAL GLAZE 390 5%	1/10W	R516	1-216-035-00	METAL GLAZE 270 5%	1/10W
R415	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R517	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R416	1-216-041-00	METAL GLAZE 470 5%	1/10W	R518	1-216-047-00	METAL GLAZE 820 5%	1/10W
R417	1-216-041-00	METAL GLAZE 470 5%	1/10W	R519	1-216-027-00	METAL GLAZE 120 5%	1/10W
R418	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R520	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R419	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R521	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R422	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R522	1-216-047-00	METAL GLAZE 820 5%	1/10W
R423	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R523	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R425	1-216-025-00	METAL GLAZE 100 5%	1/10W	R524	1-216-121-00	METAL GLAZE 1M 5%	1/10W
R426	1-216-009-00	METAL GLAZE 22 5%	1/10W	R525	1-216-031-00	METAL GLAZE 180 5%	1/10W
R427	1-216-027-00	METAL GLAZE 120 5%	1/10W	R526	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R428	1-216-076-00	METAL GLAZE 13K 5%	1/10W	R527	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R429	1-216-075-00	METAL GLAZE 12K 5%	1/10W	R528	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R430	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R529	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R431	1-216-117-00	METAL GLAZE 680K 5%	1/10W	R530	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R432	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R533	1-216-041-00	METAL GLAZE 470 5%	1/10W

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Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R534	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R593	1-216-041-00	METAL GLAZE	470	5%	1/10W
R535	1-216-031-00	METAL GLAZE	180	5%	1/10W	R594	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R536	1-216-037-00	METAL GLAZE	330	5%	1/10W	R595	1-216-092-00	METAL GLAZE	62K	5%	1/10W
R537	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	R596	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R538	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R597	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R539	1-216-295-00	METAL GLAZE	0	5%	1/10W	R598	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R540	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R599	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R541	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R601	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R542	1-216-079-00	METAL GLAZE	18K	5%	1/10W	R602	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R543	1-216-075-00	METAL GLAZE	12K	5%	1/10W	R603	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R544	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R604	1-216-041-00	METAL GLAZE	470	5%	1/10W
R545	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R605	1-216-041-00	METAL GLAZE	470	5%	1/10W
R548	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R606	1-216-033-00	METAL GLAZE	220	5%	1/10W
R549	1-216-079-00	METAL GLAZE	18K	5%	1/10W	R607	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R550	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R608	1-216-041-00	METAL GLAZE	470	5%	1/10W
R551	1-216-075-00	METAL GLAZE	12K	5%	1/10W	R609	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R552	1-216-035-00	METAL GLAZE	270	5%	1/10W	R610	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R554	1-216-295-00	METAL GLAZE	0	5%	1/10W	R611	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R555	1-216-045-00	METAL GLAZE	680	5%	1/10W	R612	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R556	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R613	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R557	1-216-041-00	METAL GLAZE	470	5%	1/10W	R614	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R559	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R615	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R560	1-216-085-00	METAL GLAZE	33K	5%	1/10W	R616	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R561	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R617	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R562	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	R618	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R563	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R619	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R564	1-216-045-00	METAL GLAZE	680	5%	1/10W	R620	1-216-037-00	METAL GLAZE	330	5%	1/10W
R565	1-216-033-00	METAL GLAZE	220	5%	1/10W	R623	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R567	1-216-035-00	METAL GLAZE	270	5%	1/10W	R625	1-216-295-00	METAL GLAZE	0	5%	1/10W
R568	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R626	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R569	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R650	1-216-041-00	METAL GLAZE	470	5%	1/10W
R570	1-216-295-00	METAL GLAZE	0	5%	1/10W	R651	1-216-295-00	METAL GLAZE	0	5%	1/10W
R571	1-216-045-00	METAL GLAZE	680	5%	1/10W	R652	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R572	1-216-045-00	METAL GLAZE	680	5%	1/10W	R655	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R573	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R656	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R574	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R657	1-216-047-00	METAL GLAZE	820	5%	1/10W
R575	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R658	1-216-039-00	METAL GLAZE	390	5%	1/10W
R576	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R659	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R577	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R660	1-216-037-00	METAL GLAZE	330	5%	1/10W
R578	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R661	1-216-025-00	METAL GLAZE	100	5%	1/10W
R579	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R662	1-216-025-00	METAL GLAZE	100	5%	1/10W
R580	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R663	1-216-025-00	METAL GLAZE	100	5%	1/10W
R581	1-216-083-00	METAL GLAZE	27K	5%	1/10W	R664	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R582	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R700	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R583	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	R701	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R584	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R702	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R585	1-216-041-00	METAL GLAZE	470	5%	1/10W	R703	1-216-041-00	METAL GLAZE	470	5%	1/10W
R586	1-216-037-00	METAL GLAZE	330	5%	1/10W	R704	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R587	1-216-039-00	METAL GLAZE	390	5%	1/10W	R705	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R589	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R706	1-216-043-00	METAL GLAZE	560	5%	1/10W
R590	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R707	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R591	1-216-031-00	METAL GLAZE	180	5%	1/10W	R708	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R592	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R709	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R710	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R831	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R711	1-216-095-00	METAL GLAZE	82K 5% 1/10W	R832	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R712	1-216-099-00	METAL GLAZE	120K 5% 1/10W	R833	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R713	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R835	1-216-103-00	METAL GLAZE	180K 5% 1/10W
R714	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R836	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R715	1-216-035-00	METAL GLAZE	270 5% 1/10W	R840	1-216-295-00	METAL GLAZE	0 5% 1/10W
R716	1-216-045-00	METAL GLAZE	680 5% 1/10W	R841	1-216-295-00	METAL GLAZE	0 5% 1/10W
R717	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R843	1-216-295-00	METAL GLAZE	0 5% 1/10W
R718	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R844	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R719	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R845	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R720	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R846	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R721	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R848	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R722	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R849	1-216-025-00	METAL GLAZE	100 5% 1/10W
R723	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R850	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R724	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R851	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R725	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R852	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R726	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R853	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R730	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R854	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R731	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R855	1-216-039-00	METAL GLAZE	390 5% 1/10W
R732	1-216-045-00	METAL GLAZE	680 5% 1/10W	R856	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R733	1-216-045-00	METAL GLAZE	680 5% 1/10W	R857	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R734	1-216-041-00	METAL GLAZE	470 5% 1/10W	R858	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R735	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R859	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R740	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R861	1-216-295-00	METAL GLAZE	0 5% 1/10W
R741	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R863	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R742	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R864	1-216-295-00	METAL GLAZE	0 5% 1/10W
R743	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R866	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R744	1-216-295-00	METAL GLAZE	0 5% 1/10W	R867	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R800	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R868	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R801	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R870	1-216-295-00	METAL GLAZE	0 5% 1/10W
R802	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R872	1-216-037-00	METAL GLAZE	330 5% 1/10W
R803	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R873	1-216-295-00	METAL GLAZE	0 5% 1/10W
R804	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R874	1-216-295-00	METAL GLAZE	0 5% 1/10W
R805	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R875	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R806	1-216-043-00	METAL GLAZE	560 5% 1/10W	R876	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R807	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R877	1-216-041-00	METAL GLAZE	470 5% 1/10W
R808	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R878	1-216-041-00	METAL GLAZE	470 5% 1/10W
R809	1-216-295-00	METAL GLAZE	0 5% 1/10W	R879	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R812	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R880	1-216-041-00	METAL GLAZE	470 5% 1/10W
R813	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R881	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R814	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R883	1-216-045-00	METAL GLAZE	680 5% 1/10W
R815	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R884	1-216-045-00	METAL GLAZE	680 5% 1/10W
R817	1-216-295-00	METAL GLAZE	0 5% 1/10W	R885	1-216-045-00	METAL GLAZE	680 5% 1/10W
R818	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R886	1-216-045-00	METAL GLAZE	680 5% 1/10W
R819	1-216-025-00	METAL GLAZE	100 5% 1/10W	R887	1-216-045-00	METAL GLAZE	680 5% 1/10W
R820	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R888	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R821	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R889	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R822	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R890	1-216-295-00	METAL GLAZE	0 5% 1/10W
R823	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R892	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R824	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R894	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R826	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R895	1-216-045-00	METAL GLAZE	680 5% 1/10W
R827	1-216-045-00	METAL GLAZE	680 5% 1/10W	R896	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R830	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R897	1-216-073-00	METAL GLAZE	10K 5% 1/10W

When indicating parts by reference number, please include the board name.





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Ref.No	Part No.	Description	Remark
D006	8-719-400-18	DIODE MA152WK	
D007	8-719-918-96	DIODE AA3422S	
D008	8-719-400-18	DIODE MA152WK	
D009	8-719-920-05	DIODE SLP281C-50	
D010	8-719-921-01	DIODE EBR5534S (UK MODEL)	
<u>IC</u>			
IC001	8-759-942-05	IC BA6800AFVC	
IC002	1-466-131-11	CATCHER RAY BLOCK (GP1U52X)	
IC003	8-759-937-56	IC S-8054ALB-LM-S	
IC004	8-759-941-78	IC S-8053ALB	
IC005	8-759-989-50	IC MB89793B-GDX401	
IC006	8-759-748-54	IC CAT35C202P	
<u>COIL</u>			
L001	1-407-169-XX	INDUCTOR 100UH	
L002	1-407-169-XX	INDUCTOR 100UH	
L003	1-407-169-XX	INDUCTOR 100UH	
<u>INDICATOR TUBE</u>			
ND001	1-519-507-31	INDICATOR TUBE, FLUORESCENT	
<u>TRANSISTOR</u>			
Q001	8-729-901-47	TRANSISTOR DTA143EK	
Q002	8-729-901-47	TRANSISTOR DTA143EK	
Q003	8-729-216-22	TRANSISTOR 2SA1162	
Q004	8-729-216-22	TRANSISTOR 2SA1162 (UK MODEL)	
<u>RESISTOR</u>			
R001	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R002	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R003	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R004	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R005	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R006	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R007	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R008	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R009	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R010	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R011	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R012	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R013	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R014	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R015	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R016	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R017	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R018	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R019	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R020	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R021	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R022	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R024	1-216-089-00	METAL GLAZE 47K 5% 1/10W (UK MODEL)	
R025	1-216-097-00	METAL GLAZE 100K 5% 1/10W	

Ref.No	Part No.	Description	Remark
R026	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R027	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R028	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R029	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R030	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R031	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R032	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R033	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R034	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R035	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R036	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R037	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R038	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R039	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R040	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R041	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R042	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R043	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R044	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R045	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R046	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R047	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R048	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R049	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R050	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R051	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R052	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R053	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R054	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R055	1-216-031-00	METAL GLAZE 180 5% 1/10W (UK MODEL)	
R056	1-216-049-00	METAL GLAZE 1K 5% 1/10W (UK MODEL)	
R058	1-216-089-00	METAL GLAZE 47K 5% 1/10W (AEP MODEL)	
<u>SWITCH</u>			
S001	1-554-174-00	SWITCH, KEY BOARD (ON/STANDBY)	
S002	1-554-174-00	SWITCH, KEY BOARD (EJECT)	
S003	1-554-174-00	SWITCH, KEY BOARD (Hi 8)	
S004	1-554-174-00	SWITCH, KEY BOARD (RESET)	
<u>CRYSTAL</u>			
X001	1-567-098-00	VIBRATOR, CRYSTAL (32.768kHz)	
*****			
*A-7061-812-A FR-41 (A) BOARD, COMPLETE			
*****			
*3-689-521-01 HOLDER, LED, ROUND			
*3-697-607-01 HOLDER (SU), LED			
3-731-123-01 BASE, VOLUME			
7-627-552-38 SCREW, PRECISION +P 1.7X3			
<u>CAPACITOR</u>			
C101	1-163-038-00	CERAMIC CHIP 0.1MF	25V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C102	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR125	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C103	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR126	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C104	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JR127	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C105	1-135-156-21	TANTAL. CHIP 6.8MF	20% 6.3V	JR128	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C106	1-135-156-21	TANTAL. CHIP 6.8MF	20% 6.3V	JR129	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C118	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR130	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C119	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR131	1-216-296-00	METAL GLAZE 0 5% 1/8W	
<u>CONNECTOR</u>				JR132	1-216-296-00	METAL GLAZE 0 5% 1/8W	
CN104	1-575-360-11	CONNECTOR, FPC/FFC 5P		JR133	1-216-296-00	METAL GLAZE 0 5% 1/8W	
CN105	1-575-362-11	CONNECTOR, FPC/FFC 11P		JR134	1-216-296-00	METAL GLAZE 0 5% 1/8W	
CN105	1-575-385-11	CABLE, FLAT (1.0MM PITCH) 11P		JR135	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CN106	1-575-365-11	CONNECTOR, FPC/FFC 18P		JR136	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<u>DIODE</u>				JR137	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D110	8-719-106-45	DIODE RD9.1M-B3		JR138	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D111	8-719-400-18	DIODE MA152WK		JR139	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D112	8-719-400-18	DIODE MA152WK		JR140	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D113	8-719-301-49	DIODE SEL2810A		JR141	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D114	8-719-301-49	DIODE SEL2810A		JR142	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D115	8-719-920-05	DIODE SLP281C-50		JR143	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D116	8-719-920-05	DIODE SLP281C-50		JR144	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D117	8-719-812-32	DIODE TLY123		JR145	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D118	8-719-920-05	DIODE SLP281C-50		JR146	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D119	8-719-920-05	DIODE SLP281C-50		JR147	1-216-296-00	METAL GLAZE 0 5% 1/8W	
D120	8-719-812-31	DIODE TLR123		JR148	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D121	8-719-301-49	DIODE SEL2810A		JR149	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<u>IC</u>				JR150	1-216-296-00	METAL GLAZE 0 5% 1/8W	
IC101	8-759-111-56	IC UPC4572G2		JR151	1-216-295-00	METAL GLAZE 0 5% 1/10W	
IC102	8-759-982-04	IC RC5532M		JR152	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<u>JACK</u>				JR153	1-216-296-00	METAL GLAZE 0 5% 1/8W	
J102	1-566-850-31	CONNECTOR, (S) TERMINAL 4P (LINE IN 2-S VIDEO)		JR154	1-216-296-00	METAL GLAZE 0 5% 1/8W	
<u>JUMPER RESISTOR</u>				JR155	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR110	1-216-295-00	METAL GLAZE 0 5% 1/10W		JR156	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR111	1-216-296-00	METAL GLAZE 0 5% 1/8W		JR157	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR112	1-216-296-00	METAL GLAZE 0 5% 1/8W		JR158	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR113	1-216-296-00	METAL GLAZE 0 5% 1/8W		JR159	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR114	1-216-295-00	METAL GLAZE 0 5% 1/10W		JR160	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR115	1-216-296-00	METAL GLAZE 0 5% 1/8W		JR161	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR116	1-216-295-00	METAL GLAZE 0 5% 1/10W		<u>TRANSISTOR</u>			
JR117	1-216-296-00	METAL GLAZE 0 5% 1/8W		Q101	8-729-901-01	TRANSISTOR DTC144EK	
JR118	1-216-296-00	METAL GLAZE 0 5% 1/8W		Q102	8-729-901-01	TRANSISTOR DTC144EK	
JR119	1-216-296-00	METAL GLAZE 0 5% 1/8W		<u>RESISTOR</u>			
JR120	1-216-295-00	METAL GLAZE 0 5% 1/10W		R101	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JR121	1-216-296-00	METAL GLAZE 0 5% 1/8W		R102	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
JR122	1-216-296-00	METAL GLAZE 0 5% 1/8W		R103	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
JR123	1-216-296-00	METAL GLAZE 0 5% 1/8W		R104	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JR124	1-216-296-00	METAL GLAZE 0 5% 1/8W		R105	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R106	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
				R107	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R108	1-216-037-00	METAL GLAZE 330 5% 1/10W	
				R109	1-216-037-00	METAL GLAZE 330 5% 1/10W	
				R110	1-216-037-00	METAL GLAZE 330 5% 1/10W	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R111	1-216-037-00	METAL GLAZE 330 5% 1/10W		C605	1-126-160-11	ELECT 1MF 20% 50V	
R112	1-216-037-00	METAL GLAZE 330 5% 1/10W		C606	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
R113	1-216-037-00	METAL GLAZE 330 5% 1/10W		C607	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
R114	1-216-037-00	METAL GLAZE 330 5% 1/10W		C608	1-124-225-00	ELECT 100MF 20% 6.3V	
R115	1-216-081-00	METAL GLAZE 22K 5% 1/10W		C609	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
R116	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C610	1-163-019-00	CERAMIC CHIP 0.0068MF 10% 50V	
R117	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W		C611	1-163-019-00	CERAMIC CHIP 0.0068MF 10% 50V	
R118	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C612	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
R119	1-216-025-00	METAL GLAZE 100 5% 1/10W		C613	1-163-123-00	CERAMIC CHIP 180PF 5% 50V	
R120	1-216-025-00	METAL GLAZE 100 5% 1/10W		C614	1-126-153-11	ELECT 22MF 20% 6.3V	
R121	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C615	1-126-153-11	ELECT 22MF 20% 6.3V	
R122	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W		C616	1-126-157-11	ELECT 10MF 20% 16V	
R123	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		C617	1-126-157-11	ELECT 10MF 20% 16V	
R125	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		C618	1-126-160-11	ELECT 1MF 20% 50V	
R127	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		C619	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
R128	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C620	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
R129	1-216-025-00	METAL GLAZE 100 5% 1/10W		C621	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
R130	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C622	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
R131	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		<u>CONNECTOR</u>			
R132	1-216-025-00	METAL GLAZE 100 5% 1/10W		CN601	1-575-367-11	CONNECTOR, FPC/FFC 11P	
R133	1-216-021-00	METAL GLAZE 68 5% 1/10W		<u>DIODE</u>			
R134	1-216-021-00	METAL GLAZE 68 5% 1/10W		D603	8-719-106-45	DIODE RD9.1M-B3	
R144	1-216-022-00	METAL GLAZE 75 5% 1/10W		D604	8-719-106-45	DIODE RD9.1M-B3	
R145	1-216-022-00	METAL GLAZE 75 5% 1/10W		D607	8-719-106-45	DIODE RD9.1M-B3	
R146	1-216-037-00	METAL GLAZE 330 5% 1/10W		<u>IC</u>			
R148	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		IC601	8-759-111-56	IC UPC4572G2	
R149	1-216-037-00	METAL GLAZE 330 5% 1/10W		<u>JACK</u>			
<u>SWITCH</u>				J601	1-565-276-31	JACK, ULTRA SMALL 1P (LINES)	
S101	1-554-174-00	SWITCH, KEY BOARD (INPUT SELECT)		J602	1-563-282-11	JACK, SMALL TYPE (MIC)	
S102	1-554-174-00	SWITCH, KEY BOARD (REC MODE LP/SP)		J603	1-562-917-11	JACK (SMALL TYPE) (HEADPHONES)	
S103	1-554-174-00	SWITCH, KEY BOARD (COUNTER RESET)		<u>TRANSISTOR</u>			
S105	1-554-174-00	SWITCH, KEY BOARD (ANT TV/VTR)		Q602	8-729-100-66	TRANSISTOR 2SC1623	
S106	1-554-174-00	SWITCH, KEY BOARD (AUTO EDIT)		Q603	8-729-100-66	TRANSISTOR 2SC1623	
S107	1-570-854-11	SWITCH, SLIDE (AUDIO MONITOR)		Q604	8-729-100-66	TRANSISTOR 2SC1623	
S108	1-554-174-00	SWITCH, KEY BOARD (RECORDER)		<u>RESISTOR</u>			
S109	1-554-174-00	SWITCH, KEY BOARD (PLAYER)		R601	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
S110	1-554-174-00	SWITCH, KEY BOARD (EDIT MONITOR)		R602	1-216-025-00	METAL GLAZE 100 5% 1/10W	
S111	1-554-174-00	SWITCH, KEY BOARD (SYNCO EDIT)		R603	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
<u>VARIABLE RESISTOR</u>				R604	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
VR101	1-237-877-11	RES, VAR, SLIDE 10K/10K (REC LEVEL)		R605	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
VR102	1-238-374-11	RES, VAR, CARBON 10K/10K (PHONE LEVEL)		R608	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
*****				R609	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
*A-7061-813-A MC-37 BOARD, COMPLETE				R610	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
*****				R611	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
<u>CAPACITOR</u>				R612	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
C601	1-124-225-00	ELECT 100MF 20% 6.3V		R613	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
C602	1-124-225-00	ELECT 100MF 20% 6.3V					
C603	1-163-123-00	CERAMIC CHIP 180PF 5% 50V					
C604	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V					

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R614	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W				IF BLOCK	
R615	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R616	1-216-073-00	METAL GLAZE 10K 5% 1/10W		IF001A	1-466-166-11	IF BLOCK (IFX-395C) (UK MODEL)	
R617	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		IF001A	1-466-167-11	IF BLOCK (IFX-389C) (AEP MODEL)	
*****						JUMPER RESISTOR	
*A-7061-814-A	TU-100 BOARD, COMPLETE (AEP MODEL) *****			JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
*A-7061-897-A	TU-100 (C) BOARD, COMPLETE (UK MODEL) *****			JR003	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR004	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CAPACITOR				JR006	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C001	1-126-233-11	ELECT 22MF 20% 25V		JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C002	1-163-035-00	CERAMIC CHIP 0.047MF 50V		JR011	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C003	1-126-233-11	ELECT 22MF 20% 25V		JR012	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C004	1-163-035-00	CERAMIC CHIP 0.047MF 50V		JR013	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C005	1-124-360-00	ELECT 1000MF 20% 16V		JR014	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C006	1-163-035-00	CERAMIC CHIP 0.047MF 50V		JR015	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C007	1-124-927-11	ELECT 4.7MF 20% 50V		JR016	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C011	1-126-233-11	ELECT 22MF 20% 25V		JR017	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C012	1-163-035-00	CERAMIC CHIP 0.047MF 50V		JR018	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C013	1-163-035-00	CERAMIC CHIP 0.047MF 50V		JR019	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C014	1-123-875-11	ELECT 10MF 20% 50V		JR020	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C015	1-163-101-00	CERAMIC CHIP 220PF 5% 50V (UK MODEL)		JR021	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C015	1-163-103-00	CERAMIC CHIP 27PF 5% 50V (AEP MODEL)		JR023	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C016	1-163-097-00	CERAMIC CHIP 15PF 5% 50V (UK MODEL)		JR025	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C016	1-163-123-00	CERAMIC CHIP 180PF 5% 50V (AEP MODEL)		JR027	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C017	1-163-111-00	CERAMIC CHIP 56PF 5% 50V (AEP MODEL)		JR032	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C017	1-163-119-00	CERAMIC CHIP 120PF 5% 50V (UK MODEL)		JR033	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C019	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V		JR034	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C020	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V		JR035	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C021	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V		JR036	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C022	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V		JR038	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C023	1-124-925-11	ELECT 2.2MF 20% 50V		JR039	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C029	1-126-233-11	ELECT 22MF 20% 25V		JR040	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C030	1-126-233-11	ELECT 22MF 20% 25V				COIL	
C032	1-163-035-00	CERAMIC CHIP 0.047MF 50V		L001	1-408-413-00	INDUCTOR 22UH	
C033	1-126-233-11	ELECT 22MF 20% 25V		L002	1-408-411-00	INDUCTOR 15UH (AEP MODEL)	
C035	1-126-233-11	ELECT 22MF 20% 25V (UK MODEL)		L002	1-408-419-00	INDUCTOR 68UH (UK MODEL)	
C042	1-136-161-00	MYLAR 0.047MF 10% 50V		L003	1-408-408-00	INDUCTOR 8.2UH	
C043	1-123-875-11	ELECT 10MF 20% 50V (UK MODEL)		L004	1-408-408-00	INDUCTOR 8.2UH	
CONNECTOR				L005	1-408-408-00	INDUCTOR 8.2UH	
CN001	1-563-605-11	CONNECTOR, FLEXIBLE 28P		L007	1-408-408-00	INDUCTOR 8.2UH	
CN001	1-575-454-11	WIRE, FLAT TYPE (28 CORE)		L009	1-408-413-00	INDUCTOR 22UH	
DIODE						DECORDER BLOCK	
D002	8-719-400-18	DIODE MA152WK		MP001A	1-466-144-11	DECORDER BLOCK (MPL-389) (AEP MODEL)	
D003	8-719-200-36	DIODE E10QS04				TRANSISTOR	
IC				Q001	8-729-100-66	TRANSISTOR 2SC1623	
IC001	8-759-157-40	IC UPC574J		Q003	8-729-216-22	TRANSISTOR 2SA1162	
				Q004	8-729-100-66	TRANSISTOR 2SC1623	

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q006	8-729-100-66	TRANSISTOR 2SC1623		R074	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)	
Q007	8-729-900-53	TRANSISTOR DTC114EK (UK MODEL)		R075	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)	
Q008	8-729-100-66	TRANSISTOR 2SC1623 (UK MODEL)		R076	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)	
Q010	8-729-901-01	TRANSISTOR DTC144EK		R077	1-216-064-00	METAL GLAZE 4.3K 5% 1/10W (AEP MODEL)	
Q014	8-729-216-22	TRANSISTOR 2SA1162 (AEP MODEL)		R078	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
<u>RESISTOR</u>				R079	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R001	1-216-295-00	METAL GLAZE 0 5% 1/10W		R080	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R002	1-216-295-00	METAL GLAZE 0 5% 1/10W		R083	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R003	1-216-295-00	METAL GLAZE 0 5% 1/10W		R090	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R004	1-216-212-00	METAL GLAZE 3.9K 5% 1/8W		R092	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R005	1-216-210-00	METAL GLAZE 3.3K 5% 1/8W		R095	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)	
R008	1-216-025-00	METAL GLAZE 100 5% 1/10W		R096	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
R009	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (UK MODEL)		<u>VARIABLE RESISTOR</u>			
R009	1-216-070-00	METAL GLAZE 7.5K 5% 1/10W (AEP MODEL)		RV001	1-228-995-00	RES, ADJ, CARBON 22K (AEP MODEL)	
R010	1-216-045-00	METAL GLAZE 680 5% 1/10W (UK MODEL)		<u>TUNER</u>			
R010	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (AEP MODEL)		TU001A.1-465-260-31	TUNER, ET (BTP-2C401) (AEP MODEL)		
R011	1-216-037-00	METAL GLAZE 330 5% 1/10W		TU001A.1-465-262-31	TUNER, ET (BTP-2U601) (UK MODEL)		
R012	1-216-039-00	METAL GLAZE 390 5% 1/10W		*****			
R013	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		*A-7061-815-A	PS-196 (A) BOARD, COMPLETE (AEP MODEL)		
R014	1-216-121-00	METAL GLAZE 1M 5% 1/10W		*****			
R015	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		*A-7061-898-A	PS-196 (B) BOARD, COMPLETE (UK MODEL)		
R016	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W		*****			
R017	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W		1-533-183-11	HOLDER, FUSE		
R018	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		*3-714-460-01	RETAINER, TRANSISTOR		
R021	1-216-295-00	METAL GLAZE 0 5% 1/10W		3-731-146-01	RETAINER (B), PS		
R022	1-216-748-11	METAL GLAZE 39K 5% 1/10W		3-731-147-01	RETAINER (A), PS		
R023	1-216-091-00	METAL GLAZE 56K 5% 1/10W		7-621-555-60	SCREW +K 2X10		
R024	1-216-295-00	METAL GLAZE 0 5% 1/10W		7-628-253-40	SCREW +PS 2X10		
R025	1-216-295-00	METAL GLAZE 0 5% 1/10W		7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3		
R029	1-216-295-00	METAL GLAZE 0 5% 1/10W		<u>CAPACITOR</u>			
R034	1-216-295-00	METAL GLAZE 0 5% 1/10W		C001 A.1-136-185-00	FILM	0.22MF	20% 250V
R044	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W (UK MODEL)		C002 A.1-136-472-11	FILM	0.1MF	20% 250V
R044	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C003 A.1-162-578-51	CERAMIC	0.0047MF	20% 400V
R046	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C004 A.1-162-578-51	CERAMIC	0.0047MF	20% 400V
R047	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W (UK MODEL)		C005 A.1-162-578-51	CERAMIC	0.0047MF	20% 400V
R047	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C006 A.1-162-578-51	CERAMIC	0.0047MF	20% 400V
R048	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W (UK MODEL)		C007 A.1-126-538-11	ELECT	100MF	20% 400V
R049	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C008 1-136-208-11	FILM	0.068MF	10% 630V
R050	1-216-085-00	METAL GLAZE 33K 5% 1/10W (UK MODEL)		C009 1-162-558-11	CERAMIC	100PF	10% 2KV
R051	1-216-091-00	METAL GLAZE 56K 5% 1/10W (UK MODEL)		C010 1-130-495-00	MYLAR	0.1MF	5% 50V
R053	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C011 1-126-589-11	ELECT	2200MF	20% 16V
R054	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (UK MODEL)		C012 1-126-587-11	ELECT	330MF	20% 16V
R056	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C013 1-123-875-11	ELECT	10MF	20% 50V
R062	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C014 1-126-588-11	ELECT	1000MF	20% 16V
R065	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C015 1-126-588-11	ELECT	1000MF	20% 16V
R067	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C016 1-126-586-11	ELECT	470MF	20% 10V
R068	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C017 1-123-875-11	ELECT	10MF	20% 50V
R069	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W (AEP MODEL)					
R070	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W (AEP MODEL)					
R071	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)					
R072	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)					
R073	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W (AEP MODEL)					

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R027	1-215-469-00	METAL 100K 1% 1/6W		C213	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R028	1-214-773-00	METAL 68K 1% 1/4W		C214	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R029	1-249-411-11	CARBON 330 5% 1/4W		C215	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R030	1-249-405-11	CARBON 100 5% 1/4W		C216	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R031	1-249-415-11	CARBON 680 5% 1/4W		C217	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R032	1-249-429-11	CARBON 10K 5% 1/4W		C218	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R034	△.1-247-738-11	CARBON 82 5% 1/2W F		C219	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R035	1-249-423-11	CARBON 3.3K 5% 1/4W		C220	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R036	1-247-725-11	CARBON 10K 5% 1/4W		C221	1-124-443-00	ELECT 100MF	20% 6.3V
				C222	1-124-443-00	ELECT 100MF	20% 6.3V
<u>TRANSFORMER</u>				C223	1-126-233-11	ELECT 22MF	20% 25V
T001	△.1-449-924-11	TRANSFORMER, RCC CONVERTER		C224	1-124-443-00	ELECT 100MF	20% 6.3V
T002	△.1-449-914-11	TRANSFORMER, CONVERTER		C225	1-163-038-00	CERAMIC CHIP 0.1MF	25V
*****				C226	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C227	1-164-232-11	CERAMIC CHIP 0.01MF	50V
	*A-7061-816-A	DS-35 (A) BOARD, COMPLETE (AEP MODEL)		C228	1-163-098-00	CERAMIC CHIP 16PF	5% 50V
		*****		C229	1-163-098-00	CERAMIC CHIP 16PF	5% 50V
	*A-7061-892-A	DS-35 (B) BOARD, COMPLETE (UK MODEL)		C230	1-124-443-00	ELECT 100MF	20% 6.3V
		*****		C231	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C232	1-124-791-11	ELECT 1MF	20% 50V
<u>BUZZER</u>				C233	1-163-089-00	CERAMIC CHIP 6PF	0.25PF 50V
BZ001	1-529-070-11	BUZZER		C235	1-126-233-11	ELECT 22MF	20% 25V
<u>CAPACITOR</u>				C236	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C001	1-125-486-11	DOUBLE LAYER 0.22F	5.5V	C237	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C002	1-124-446-11	ELECT 47MF	20% 10V	C238	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C003	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C239	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C004	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C240	1-123-875-11	ELECT 10MF	20% 50V
C005	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C241	1-124-791-11	ELECT 1MF	20% 50V
C006	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C242	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C007	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C243	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C008	1-123-875-11	ELECT 10MF	20% 50V	C244	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C009	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C245	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C246	1-124-443-00	ELECT 100MF	20% 6.3V
C012	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	C247	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C013	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	C248	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C014	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	C249	1-126-233-11	ELECT 22MF	20% 25V
C015	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	C250	1-126-233-11	ELECT 22MF	20% 25V
C016	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	C251	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C017	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V (AEP MODEL)	C252	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C018	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V (AEP MODEL)	C253	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C019	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	C254	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C021	1-123-875-11	ELECT 10MF	20% 50V	C255	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C024	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C256	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C025	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C257	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C026	1-124-471-00	ELECT 1000MF	20% 6.3V	C258	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C201	1-124-443-00	ELECT 100MF	20% 6.3V	C259	1-124-791-11	ELECT 1MF	20% 50V
C202	1-124-443-00	ELECT 100MF	20% 6.3V	C260	1-124-443-00	ELECT 100MF	20% 6.3V
C209	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C261	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C210	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C262	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C211	1-124-443-00	ELECT 100MF	20% 6.3V	C263	1-124-791-11	ELECT 1MF	20% 50V
C212	1-124-443-00	ELECT 100MF	20% 6.3V	C264	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
				C265	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C266	1-163-135-00	CERAMIC CHIP 560PF	5% 50V

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C267	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C328	1-124-791-11	ELECT 1MF	20% 50V
C268	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C329	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C269	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C330	1-123-875-11	ELECT 10MF	20% 50V
C270	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C331	1-124-791-11	ELECT 1MF	20% 50V
C271	1-126-233-11	ELECT 22MF	20% 25V	C332	1-124-791-11	ELECT 1MF	20% 50V
C272	1-124-902-00	ELECT 0.47MF	20% 50V	C333	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C273	1-124-791-11	ELECT 1MF	20% 50V	C334	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C274	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C335	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C275	1-124-443-00	ELECT 100MF	20% 6.3V	C336	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C278	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C337	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C279	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C338	1-126-233-11	ELECT 22MF	20% 25V
C280	1-123-382-00	ELECT 3.3MF	20% 50V	C339	1-126-233-11	ELECT 22MF	20% 25V
C281	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C340	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C282	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C341	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C283	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C342	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C284	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C343	1-124-443-00	ELECT 100MF	20% 6.3V
C285	1-124-791-11	ELECT 1MF	20% 50V	C344	1-124-443-00	ELECT 100MF	20% 6.3V
C286	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C345	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C287	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C346	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C288	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C347	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C289	1-124-443-00	ELECT 100MF	20% 6.3V	C348	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C290	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C349	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C291	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C350	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C292	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C351	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C293	1-124-925-11	ELECT 2.2MF	20% 50V	C352	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C294	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C353	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C295	1-123-875-11	ELECT 10MF	20% 50V	C354	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C296	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C355	1-124-443-00	ELECT 100MF	20% 6.3V
C297	1-124-791-11	ELECT 1MF	20% 50V	C356	1-124-443-00	ELECT 100MF	20% 6.3V
C299	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C357	1-126-233-11	ELECT 22MF	20% 25V
C300	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C358	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C301	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C359	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C303	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C360	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C304	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C361	1-126-233-11	ELECT 22MF	20% 25V
C305	1-126-233-11	ELECT 22MF	20% 25V	C362	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C307	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C363	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C308	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C364	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C309	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C365	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C312	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C366	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C313	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C367	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C314	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C368	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C315	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C369	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C316	1-124-925-11	ELECT 2.2MF	20% 50V	C370	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C317	1-124-443-00	ELECT 100MF	20% 6.3V	C371	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C318	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C372	1-123-382-00	ELECT 3.3MF	20% 50V
C319	1-124-902-00	ELECT 0.47MF	20% 50V	C373	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C320	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C374	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C321	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C375	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C322	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C376	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C323	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C377	1-124-791-11	ELECT 1MF	20% 50V
C324	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C378	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C325	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C379	1-124-443-00	ELECT 100MF	20% 6.3V
C326	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C380	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C381	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V	CN007	1-575-387-11	CABLE, FLAT (1.0MM PITCH) 12P	
C382	1-123-875-11	ELECT 10MF	20% 50V	CN008	1-575-365-11	CONNECTOR, FPC/FFC 18P	
C512	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN008	1-575-390-11	CABLE, FLAT (1.0MM PITCH) 18P	
C513	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	CN009	1-575-365-11	CONNECTOR, FPC/FFC 18P	
C514	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	CN009	1-575-390-11	CABLE, FLAT (1.0MM PITCH) 18P	
C515	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN010	1-569-264-11	CONNECTOR, FPC (ZIF TYPE) 8P	
C516	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	CN012	1-506-468-11	PIN, CONNECTOR 3P	
C517	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	CN201	1-568-099-11	SOCKET, CONNECTOR 18P	
C518	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CN202	1-563-597-11	CONNECTOR, FLEXIBLE 20P	
C519	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN202	1-575-456-11	WIRE, FLAT TYPE (20 CORE)	
C520	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	<u>TRIMMER</u>			
C521	1-124-438-00	ELECT 1MF	20% 50V	CV201	1-141-245-00	TRIMMER, CERAMIC	
C522	1-124-438-00	ELECT 1MF	20% 50V	CV202	1-141-245-00	TRIMMER, CERAMIC	
C523	1-124-438-00	ELECT 1MF	20% 50V	CV203	1-141-245-00	TRIMMER, CERAMIC	
C524	1-163-038-00	CERAMIC CHIP 0.1MF	25V	CV501	1-141-245-00	TRIMMER, CERAMIC	
C525	1-163-038-00	CERAMIC CHIP 0.1MF	25V	<u>DIODE</u>			
C526	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D001	8-719-200-27	DIODE E10DS2 (AEP MODEL)	
C527	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D001	8-719-202-36	DIODE E10QS03 (UK MODEL)	
C528	1-126-177-11	ELECT 100MF	20% 6.3V	D002	8-719-200-27	DIODE E10DS2 (AEP MODEL)	
C529	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D002	8-719-202-36	DIODE E10QS03 (UK MODEL)	
C530	1-126-177-11	ELECT 100MF	20% 6.3V	D003	8-719-200-27	DIODE E10DS2 (AEP MODEL)	
C531	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D003	8-719-200-27	DIODE E10DS2 (UK MODEL)	
C532	1-126-177-11	ELECT 100MF	20% 6.3V	D004	8-719-801-41	DIODE 1SS196	
C533	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	D007	8-719-400-18	DIODE MA152WK	
C534	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	D201	8-719-104-34	DIODE 1S2836	
C535	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D202	8-719-400-18	DIODE MA152WK	
C536	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	D203	8-719-400-18	DIODE MA152WK	
C537	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	D204	8-719-400-18	DIODE MA152WK	
C538	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D205	8-719-400-18	DIODE MA152WK	
C539	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D206	8-719-800-76	DIODE 1SS226	
C540	1-126-177-11	ELECT 100MF	20% 6.3V	D207	8-719-800-76	DIODE 1SS226	
C541	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D208	8-719-800-76	DIODE 1SS226	
C542	1-126-177-11	ELECT 100MF	20% 6.3V	D209	8-719-800-76	DIODE 1SS226	
C543	1-124-438-00	ELECT 1MF	20% 50V	D210	8-719-800-76	DIODE 1SS226	
C544	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D211	8-719-800-76	DIODE 1SS226	
C545	1-124-438-00	ELECT 1MF	20% 50V	D212	8-719-105-92	DIODE RD5.6MB3	
C546	1-124-438-00	ELECT 1MF	20% 50V	<u>FERRITE BEAD INDUCTOR</u>			
C547	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FB501	1-410-397-21	FERRITE BEAD INDUCTOR	
C548	1-126-177-11	ELECT 100MF	20% 6.3V	<u>FILTER</u>			
C551	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL201	1-236-054-11	FILTER, LC (LOW PASS)	
<u>FILTER</u>				FL501	1-236-071-11	ENCAPSULATED COMPONENT	
CF001	1-567-192-11	OSCILLATOR, CERAMIC (4MHz)		FL502	1-236-071-11	ENCAPSULATED COMPONENT	
CF002	1-567-192-11	OSCILLATOR, CERAMIC (4MHz) (AEP MODEL)		FL503	1-236-129-11	ENCAPSULATED COMPONENT	
<u>CONNECTOR</u>				FL504	1-236-129-11	ENCAPSULATED COMPONENT	
CN001	1-575-360-11	CONNECTOR, FPC/FFC 5P		FL505	1-236-129-11	ENCAPSULATED COMPONENT	
CN001	1-575-391-11	CABLE, FLAT (1.0MM PITCH) 5P		<u>IC</u>			
CN002	1-575-366-11	CONNECTOR, FPC/FFC 9P		IC001	8-759-149-18	IC UPD75116-GF-605-3BE	
CN004	1-569-239-11	SOCKET, CONNECTOR 20P		IC002	8-759-147-30	IC UPD75004GB-VSX182	
CN005	1-569-239-11	SOCKET, CONNECTOR 20P					
CN006	1-563-605-11	CONNECTOR, FLEXIBLE 28P					
CN007	1-575-363-11	CONNECTOR, FPC/FFC 12P					

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
IC003	8-759-030-60	IC SDA5642	
IC004	8-759-932-54	IC BU4066BF	
IC005	8-759-990-07	IC TL1596CNS	
IC201	8-759-009-07	IC MC14053BF	
IC202	8-759-009-07	IC MC14053BF	
IC203	8-759-009-07	IC MC14053BF	
IC204	8-759-633-63	IC M50455-137FP	
IC205	8-759-710-29	IC NJM2235M	
IC206	8-759-710-09	IC NJM2233AM	
IC207	8-759-009-07	IC MC14053BF	
IC208	8-759-009-07	IC MC14053BF	
IC209	8-759-603-54	IC M51271FP	
IC210	8-759-631-10	IC M52684AFP	
IC211	8-759-631-10	IC M52684AFP	
IC212	8-759-007-69	IC MC74HC157F	
IC213	8-759-633-XX	IC M51285BFP-V	
IC214	8-759-710-29	IC NJM2235M	
IC215	8-759-710-07	IC NJM2234M	
IC501	8-759-631-06	IC M50541FP	
IC502	8-759-605-15	IC MSM4C500L	
IC503	8-759-633-04	IC M52686AFP	
IC504	8-759-633-96	IC M52682FP	
IC505	8-759-925-72	IC SN74HC02NS	
IC506	8-759-233-64	IC TC74HCU04AF	
IC507	8-759-009-07	IC MC14053BF	
<u>COIL</u>			
L001	1-407-169-XX	INDUCTOR 100UH	
L002	1-407-169-XX	INDUCTOR 100UH	
L201	1-407-169-XX	INDUCTOR 100UH	
L202	1-408-975-21	INDUCTOR 27UH	
L203	1-408-977-21	INDUCTOR 39UH	
L204	1-407-169-XX	INDUCTOR 100UH	
L205	1-412-143-11	MICRO INDUCTOR (39UH)	
L206	1-408-978-21	INDUCTOR 47UH	
L207	1-407-169-XX	INDUCTOR 100UH	
L209	1-408-970-21	INDUCTOR 10UH	
L210	1-408-970-21	INDUCTOR 10UH	
L211	1-408-970-21	INDUCTOR 10UH	
L212	1-408-970-21	INDUCTOR 10UH	
L213	1-407-169-XX	INDUCTOR 100UH	
L501	1-408-978-21	INDUCTOR 47UH	
L502	1-407-169-XX	INDUCTOR 100UH	
<u>TRANSISTOR</u>			
Q001	8-729-901-04	TRANSISTOR DTA114EK	
Q002	8-729-901-04	TRANSISTOR DTA114EK	
Q003	8-729-807-87	TRANSISTOR 2SB1295-UL6	
Q004	8-729-901-01	TRANSISTOR DTC144EK	
Q005	8-729-805-25	TRANSISTOR 2SB1121	
Q006	8-729-216-22	TRANSISTOR 2SA1162	
Q007	8-729-216-22	TRANSISTOR 2SA1162	
Q015	8-729-901-00	TRANSISTOR DTC124EK	

Ref.No	Part No.	Description	Remark
Q016	8-729-901-04	TRANSISTOR DTA114EK	
Q017	8-729-901-01	TRANSISTOR DTC144EK	
Q201	8-729-216-22	TRANSISTOR 2SA1162	
Q202	8-729-216-22	TRANSISTOR 2SA1162	
Q203	8-729-216-22	TRANSISTOR 2SA1162	
Q207	8-729-216-22	TRANSISTOR 2SA1162	
Q208	8-729-216-22	TRANSISTOR 2SA1162	
Q209	8-729-216-22	TRANSISTOR 2SA1162	
Q210	8-729-100-66	TRANSISTOR 2SC1623	
Q211	8-729-100-66	TRANSISTOR 2SC1623	
Q212	8-729-100-66	TRANSISTOR 2SC1623	
Q213	8-729-100-66	TRANSISTOR 2SC1623	
Q214	8-729-216-22	TRANSISTOR 2SA1162	
Q215	8-729-216-22	TRANSISTOR 2SA1162	
Q216	8-729-100-66	TRANSISTOR 2SC1623	
Q217	8-729-216-22	TRANSISTOR 2SA1162	
Q218	8-729-100-66	TRANSISTOR 2SC1623	
Q219	8-729-100-66	TRANSISTOR 2SC1623	
Q220	8-729-216-22	TRANSISTOR 2SA1162	
Q221	8-729-216-22	TRANSISTOR 2SA1162	
Q222	8-729-216-22	TRANSISTOR 2SA1162	
Q223	8-729-100-66	TRANSISTOR 2SC1623	
Q224	8-729-100-66	TRANSISTOR 2SC1623	
Q225	8-729-216-22	TRANSISTOR 2SA1162	
Q226	8-729-100-66	TRANSISTOR 2SC1623	
Q227	8-729-100-66	TRANSISTOR 2SC1623	
Q228	8-729-100-66	TRANSISTOR 2SC1623	
Q229	8-729-100-66	TRANSISTOR 2SC1623	
Q230	8-729-100-66	TRANSISTOR 2SC1623	
Q231	8-729-100-66	TRANSISTOR 2SC1623	
Q232	8-729-216-22	TRANSISTOR 2SA1162	
Q233	8-729-216-22	TRANSISTOR 2SA1162	
Q234	8-729-216-22	TRANSISTOR 2SA1162	
Q235	8-729-100-66	TRANSISTOR 2SC1623	
Q236	8-729-100-66	TRANSISTOR 2SC1623	
Q237	8-729-100-66	TRANSISTOR 2SC1623	
Q238	8-729-100-66	TRANSISTOR 2SC1623	
Q239	8-729-100-66	TRANSISTOR 2SC1623	
Q240	8-729-216-22	TRANSISTOR 2SA1162	
Q241	8-729-100-66	TRANSISTOR 2SC1623	
Q242	8-729-100-66	TRANSISTOR 2SC1623	
Q243	8-729-100-66	TRANSISTOR 2SC1623	
Q244	8-729-100-66	TRANSISTOR 2SC1623	
Q245	8-729-100-66	TRANSISTOR 2SC1623	
Q246	8-729-216-22	TRANSISTOR 2SA1162	
Q247	8-729-100-66	TRANSISTOR 2SC1623	
Q248	8-729-100-66	TRANSISTOR 2SC1623	
Q249	8-729-100-66	TRANSISTOR 2SC1623	
Q250	8-729-100-66	TRANSISTOR 2SC1623	
Q251	8-729-216-22	TRANSISTOR 2SA1162	
Q252	8-729-100-66	TRANSISTOR 2SC1623	
Q253	8-729-100-66	TRANSISTOR 2SC1623	
Q254	8-729-100-66	TRANSISTOR 2SC1623	

When indicating parts by reference number, please include the board name.



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Ref.No	Part No.	Description
Q255	8-729-100-66	TRANSISTOR 2SC1623
Q256	8-729-216-22	TRANSISTOR 2SA1162
Q257	8-729-100-66	TRANSISTOR 2SC1623
Q258	8-729-100-66	TRANSISTOR 2SC1623
Q259	8-729-100-66	TRANSISTOR 2SC1623
Q260	8-729-100-66	TRANSISTOR 2SC1623
Q261	8-729-216-22	TRANSISTOR 2SA1162
Q262	8-729-100-66	TRANSISTOR 2SC1623
Q263	8-729-100-66	TRANSISTOR 2SC1623
Q264	8-729-100-66	TRANSISTOR 2SC1623
Q265	8-729-100-66	TRANSISTOR 2SC1623
Q266	8-729-216-22	TRANSISTOR 2SA1162
Q267	8-729-100-66	TRANSISTOR 2SC1623
Q268	8-729-100-66	TRANSISTOR 2SC1623
Q269	8-729-100-66	TRANSISTOR 2SC1623
Q270	8-729-100-66	TRANSISTOR 2SC1623
Q271	8-729-216-22	TRANSISTOR 2SA1162
Q272	8-729-216-22	TRANSISTOR 2SA1162
Q273	8-729-100-66	TRANSISTOR 2SC1623
Q274	8-729-216-22	TRANSISTOR 2SA1162
Q275	8-729-100-66	TRANSISTOR 2SC1623
Q276	8-729-216-22	TRANSISTOR 2SA1162
Q277	8-729-901-06	TRANSISTOR DTA144EK
Q278	8-729-216-22	TRANSISTOR 2SA1162
Q501	8-729-216-22	TRANSISTOR 2SA1162
Q502	8-729-216-22	TRANSISTOR 2SA1162
Q503	8-729-216-22	TRANSISTOR 2SA1162

## RESISTOR

R003	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R004	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R005	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R006	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R007	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R008	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R009	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R010	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R011	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R012	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R013	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R014	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R015	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R016	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R017	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R018	1-216-596-11	METAL GLAZE	2.7K	1%	1/10W
R019	1-216-121-00	METAL GLAZE	1M	5%	1/10W (AEP MODEL)
R020	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R021	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R022	1-216-162-00	METAL GLAZE	33	5%	1/8W
R023	1-216-162-00	METAL GLAZE	33	5%	1/8W
R024	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R025	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R026	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W

Ref.No	Part No.	Description	Remark
R027	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R037	1-216-089-00	METAL GLAZE	47K 5% 1/10W (AEP MODEL)
R038	1-216-089-00	METAL GLAZE	47K 5% 1/10W (AEP MODEL)
R039	1-216-097-00	METAL GLAZE	100K 5% 1/10W (AEP MODEL)
R040	1-216-119-00	METAL GLAZE	820K 5% 1/10W (AEP MODEL)
R041	1-216-066-00	METAL GLAZE	5.1K 5% 1/10W (AEP MODEL)
R042	1-216-119-00	METAL GLAZE	820K 5% 1/10W (AEP MODEL)
R043	1-216-025-00	METAL GLAZE	100 5% 1/10W (AEP MODEL)
R044	1-216-017-00	METAL GLAZE	47 5% 1/10W
R045	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R046	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R050	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R052	1-216-295-00	METAL GLAZE	0 5% 1/10W
R053	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R056	1-216-295-00	METAL GLAZE	0 5% 1/10W
R058	1-216-295-00	METAL GLAZE	0 5% 1/10W
R059	1-216-296-00	METAL GLAZE	0 5% 1/8W
R060	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R061	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R062	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R063	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R064	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R065	1-216-295-00	METAL GLAZE	0 5% 1/10W
R067	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R068	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R069	1-216-295-00	METAL GLAZE	0 5% 1/10W
R071	1-216-073-00	METAL GLAZE	10K 5% 1/10W (AEP MODEL)
R072	1-216-073-00	METAL GLAZE	10K 5% 1/10W (AEP MODEL)
R074	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R075	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R076	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R201	1-216-025-00	METAL GLAZE	100 5% 1/10W
R202	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R203	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R204	1-216-025-00	METAL GLAZE	100 5% 1/10W
R205	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R206	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R207	1-216-025-00	METAL GLAZE	100 5% 1/10W
R208	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R209	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R211	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R214	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R217	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R219	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R220	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R221	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R222	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R223	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R224	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R225	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R226	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R227	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R228	1-216-073-00	METAL GLAZE	10K 5% 1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R229	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R283	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R230	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R284	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R231	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R285	1-216-021-00	METAL GLAZE 68 5%	1/10W
R232	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R286	1-216-025-00	METAL GLAZE 100 5%	1/10W
R233	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R287	1-216-295-00	METAL GLAZE 0 5%	1/10W
R234	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R288	1-216-295-00	METAL GLAZE 0 5%	1/10W
R235	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R291	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R236	1-216-031-00	METAL GLAZE 180 5%	1/10W	R292	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R237	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R293	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R238	1-216-039-00	METAL GLAZE 390 5%	1/10W	R294	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R239	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R295	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R240	1-216-031-00	METAL GLAZE 180 5%	1/10W	R296	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R241	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R297	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R242	1-216-033-00	METAL GLAZE 220 5%	1/10W	R298	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R243	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R299	1-216-041-00	METAL GLAZE 470 5%	1/10W
R244	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R300	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R245	1-216-295-00	METAL GLAZE 0 5%	1/10W	R301	1-216-035-00	METAL GLAZE 270 5%	1/10W
R247	1-216-041-00	METAL GLAZE 470 5%	1/10W	R302	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R248	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R303	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R249	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R304	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R250	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R305	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R251	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R306	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R252	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R307	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R253	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R308	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R254	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R309	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R255	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R330	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R256	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R331	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R257	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R332	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R258	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R333	1-216-041-00	METAL GLAZE 470 5%	1/10W
R259	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R334	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R260	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R335	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R261	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R336	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R262	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R337	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R263	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R338	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R264	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R339	1-216-039-00	METAL GLAZE 390 5%	1/10W
R265	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R340	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R266	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R341	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R267	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R342	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R268	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R343	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R269	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R344	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R270	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R345	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R271	1-216-041-00	METAL GLAZE 470 5%	1/10W	R346	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R272	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R347	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R273	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R348	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R274	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R349	1-216-047-00	METAL GLAZE 820 5%	1/10W
R275	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R350	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R276	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R351	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R277	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R352	1-216-047-00	METAL GLAZE 820 5%	1/10W
R278	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R353	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R279	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R354	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R280	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R355	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R281	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R356	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R282	1-216-037-00	METAL GLAZE 330 5%	1/10W	R357	1-216-035-00	METAL GLAZE 270 5%	1/10W

When indicating parts by reference number, please include the board name.

# DS-35

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R358	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R413	1-216-047-00	METAL GLAZE 820 5%	1/10W
R359	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R414	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R361	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R415	1-216-025-00	METAL GLAZE 100 5%	1/10W
R362	1-216-035-00	METAL GLAZE 270 5%	1/10W	R416	1-216-025-00	METAL GLAZE 100 5%	1/10W
R363	1-216-019-00	METAL GLAZE 56 5%	1/10W	R417	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R364	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R418	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R365	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R419	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R366	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R420	1-216-022-00	METAL GLAZE 75 5%	1/10W
R367	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R421	1-216-025-00	METAL GLAZE 100 5%	1/10W
R369	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R422	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R370	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R423	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R371	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R424	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R372	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R425	1-216-047-00	METAL GLAZE 820 5%	1/10W
R373	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R426	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R374	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R427	1-216-025-00	METAL GLAZE 100 5%	1/10W
R375	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R428	1-216-025-00	METAL GLAZE 100 5%	1/10W
R376	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R429	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R377	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R430	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R378	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R431	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R379	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R432	1-216-022-00	METAL GLAZE 75 5%	1/10W
R380	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R433	1-216-025-00	METAL GLAZE 100 5%	1/10W
R381	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R434	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R382	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R435	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R383	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R436	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R384	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R437	1-216-047-00	METAL GLAZE 820 5%	1/10W
R385	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R438	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R386	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R439	1-216-025-00	METAL GLAZE 100 5%	1/10W
R387	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R440	1-216-025-00	METAL GLAZE 100 5%	1/10W
R388	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R441	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R389	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R442	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R390	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R443	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R391	1-216-043-00	METAL GLAZE 560 5%	1/10W	R444	1-216-022-00	METAL GLAZE 75 5%	1/10W
R392	1-216-043-00	METAL GLAZE 560 5%	1/10W	R445	1-216-025-00	METAL GLAZE 100 5%	1/10W
R393	1-216-048-00	METAL GLAZE 910 5%	1/10W	R446	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R394	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R447	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R395	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R448	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R396	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R449	1-216-047-00	METAL GLAZE 820 5%	1/10W
R397	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R450	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R398	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R451	1-216-025-00	METAL GLAZE 100 5%	1/10W
R399	1-216-025-00	METAL GLAZE 100 5%	1/10W	R452	1-216-025-00	METAL GLAZE 100 5%	1/10W
R400	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R453	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R401	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R454	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R402	1-216-047-00	METAL GLAZE 820 5%	1/10W	R455	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R403	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R456	1-216-022-00	METAL GLAZE 75 5%	1/10W
R404	1-216-025-00	METAL GLAZE 100 5%	1/10W	R457	1-216-025-00	METAL GLAZE 100 5%	1/10W
R405	1-216-025-00	METAL GLAZE 100 5%	1/10W	R458	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R406	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R459	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R407	1-216-309-00	METAL GLAZE 5.6 5%	1/10W	R460	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R408	1-216-309-00	METAL GLAZE 5.6 5%	1/10W	R461	1-216-047-00	METAL GLAZE 820 5%	1/10W
R409	1-216-022-00	METAL GLAZE 75 5%	1/10W	R462	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R410	1-216-025-00	METAL GLAZE 100 5%	1/10W	R463	1-216-025-00	METAL GLAZE 100 5%	1/10W
R411	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R464	1-216-025-00	METAL GLAZE 100 5%	1/10W
R412	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R465	1-216-049-00	METAL GLAZE 1K 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R466	1-216-309-00	METAL GLAZE	5.6 5% 1/10W	R527	1-216-017-00	METAL GLAZE	47 5% 1/10W
R467	1-216-309-00	METAL GLAZE	5.6 5% 1/10W	R528	1-216-017-00	METAL GLAZE	47 5% 1/10W
R468	1-216-022-00	METAL GLAZE	75 5% 1/10W	R529	1-216-017-00	METAL GLAZE	47 5% 1/10W
R469	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R530	1-216-017-00	METAL GLAZE	47 5% 1/10W
R470	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R531	1-216-017-00	METAL GLAZE	47 5% 1/10W
R471	1-216-041-00	METAL GLAZE	470 5% 1/10W	R532	1-216-017-00	METAL GLAZE	47 5% 1/10W
R472	1-216-041-00	METAL GLAZE	470 5% 1/10W	R533	1-216-017-00	METAL GLAZE	47 5% 1/10W
R473	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R534	1-216-017-00	METAL GLAZE	47 5% 1/10W
R474	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R535	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R475	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R537	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R476	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R538	1-216-041-00	METAL GLAZE	470 5% 1/10W
R477	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R539	1-216-017-00	METAL GLAZE	47 5% 1/10W
R478	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R540	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R479	1-216-041-00	METAL GLAZE	470 5% 1/10W	R541	1-216-017-00	METAL GLAZE	47 5% 1/10W
R480	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R542	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R481	1-216-041-00	METAL GLAZE	470 5% 1/10W	R543	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R482	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R544	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R483	1-216-035-00	METAL GLAZE	270 5% 1/10W	R545	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R484	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R546	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R485	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R547	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R486	1-216-097-00	METAL GLAZE	100K 5% 1/10W	VARIABLE RESISTOR			
R487	1-216-073-00	METAL GLAZE	10K 5% 1/10W	RV201	1-228-996-00	RES, ADJ, CARBON 47K	
R488	1-216-113-00	METAL GLAZE	470K 5% 1/10W	RV202	1-228-996-00	RES, ADJ, CARBON 47K	
R489	1-216-022-00	METAL GLAZE	75 5% 1/10W	RV203	1-228-990-00	RES, ADJ, CARBON 1K	
R490	1-216-091-00	METAL GLAZE	56K 5% 1/10W	RV204	1-228-990-00	RES, ADJ, CARBON 1K	
R491	1-216-049-00	METAL GLAZE	1K 5% 1/10W	RV205	1-228-993-00	RES, ADJ, CARBON 4.7K	
R492	1-216-089-00	METAL GLAZE	47K 5% 1/10W	RV206	1-228-990-00	RES, ADJ, CARBON 1K	
R501	1-216-073-00	METAL GLAZE	10K 5% 1/10W	CRYSTAL			
R502	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X201	1-577-289-11	VIBRATOR, CRYSTAL (17.7MHz)	
R503	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X202	1-567-733-11	VIBRATOR, CRYSTAL (17.7MHz)	
R504	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X203	1-577-165-11	VIBLATOR, CERAMIC (500kHz)	
R505	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X204	1-567-733-11	VIBRATOR, CRYSTAL (17.7MHz)	
R506	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X205	1-577-165-11	VIBLATOR, CERAMIC (500kHz)	
R507	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X206	1-577-165-11	VIBLATOR, CERAMIC (500kHz)	
R508	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X501	1-577-164-11	VIBLATOR, CERAMIC (30.2MHz)	
R509	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*****			
R510	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*1-633-526-11	IN-24 BOARD		
R511	1-216-049-00	METAL GLAZE	1K 5% 1/10W		*****		
R512	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CONNECTOR			
R513	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN501	*1-506-484-11	PIN, CONNECTOR 5P	
R514	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN502	1-568-096-11	CONNECTOR (PLUG) 26P	
R515	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN503	1-506-483-21	PIN, CONNECTOR 4P	
R516	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN504	1-568-094-11	CONNECTOR (PLUG) 22P	
R517	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN505	*1-568-098-11	CONNECTOR (PLUG) 30P	
R518	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN506	*1-568-098-11	CONNECTOR (PLUG) 30P	
R519	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN507	1-568-092-11	CONNECTOR (PLUG) 18P	
R520	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN508	1-568-090-11	CONNECTOR (PLUG) 14P	
R521	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN509	*1-564-988-11	PIN, CONNECTOR 14P	
R522	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN510	*1-566-668-11	PIN, CONNECTOR 20P	
R523	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R524	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R525	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R526	1-216-017-00	METAL GLAZE	47 5% 1/10W				

When indicating parts by reference number, please include the board name.

**IN-24****FJ-2****YC-64**

Ref.No	Part No.	Description	Remark
CN511	*1-566-668-11	PIN, CONNECTOR 20P	
CN512	*1-566-667-11	PIN, CONNECTOR 18P	
CN513	*1-563-633-11	CONNECTOR, FLEXIBLE 30P	

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\*A-7061-890-A FJ-2 BOARD, COMPLETE  
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CAPACITOR

C107	1-135-156-21	TANTAL. CHIP 6.8MF	20%	6.3V
C108	1-135-156-21	TANTAL. CHIP 6.8MF	20%	6.3V
C109	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C110	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C111	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C112	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C113	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C114	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C115	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C116	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C117	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C120	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C121	1-135-091-00	TANTAL. CHIP 1MF	20%	16V

DIODE

D101 8-719-104-34 DIODE 1S2836

IC

IC103 8-759-111-56 IC UPC4572G2

JACK

J101 1-565-735-21 JACK, PIN 3P (LINE IN 2)

JUMPER RESISTOR

JR101	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR102	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR103	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR104	1-216-295-00	METAL GLAZE	0	5%	1/10W

RESISTOR

R135	1-216-001-00	METAL GLAZE	10	5%	1/10W
R136	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R137	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R138	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R139	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R140	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R141	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R142	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R143	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R150	1-216-022-00	METAL GLAZE	75	5%	1/10W

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Ref.No	Part No.	Description	Remark
*A-7061-896-A	YC-64 (B) BOARD, COMPLETE (UK MODEL)	*****	

\*A-7061-900-A YC-64 (A) BOARD, COMPLETE (AEP MODEL)  
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CAPACITOR

C001	1-126-233-11	ELECT	22MF	20%	25V
C002	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C003	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C004	1-124-443-00	ELECT	100MF	20%	6.3V
C005	1-124-443-00	ELECT	100MF	20%	6.3V
C007	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C008	1-126-233-11	ELECT	22MF	20%	25V (AEP MODEL)
C009	1-126-233-11	ELECT	22MF	20%	25V (AEP MODEL)
C010	1-126-233-11	ELECT	22MF		25V
C011	1-126-233-11	ELECT	22MF	20%	25V
C012	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C013	1-124-443-00	ELECT	100MF	20%	6.3V
C014	1-124-443-00	ELECT	100MF	20%	6.3V
C015	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C016	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C017	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C018	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C019	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C020	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C021	1-126-233-11	ELECT	22MF	20%	25V
C022	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C023	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C024	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C025	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C026	1-124-443-00	ELECT	100MF	20%	6.3V
C027	1-124-443-00	ELECT	100MF	20%	6.3V
C028	1-123-875-11	ELECT	10MF	20%	50V
C029	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C030	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C031	1-126-233-11	ELECT	22MF	20%	25V
C032	1-126-233-11	ELECT	22MF	20%	25V
C033	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C034	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C035	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C036	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C037	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C038	1-163-101-00	CERAMIC CHIP	22PF	5% 50V	(AEP MODEL)
C039	1-163-115-00	CERAMIC CHIP	82PF	5% 50V	(AEP MODEL)
C040	1-163-115-00	CERAMIC CHIP	82PF	5% 50V	(AEP MODEL)
C043	1-163-124-00	CERAMIC CHIP	200PF	5% 50V	(AEP MODEL)
C044	1-163-093-00	CERAMIC CHIP	10PF	5% 50V	(AEP MODEL)
C045	1-163-115-00	CERAMIC CHIP	82PF	5% 50V	(AEP MODEL)
C046	1-163-103-00	CERAMIC CHIP	27PF	5% 50V	(AEP MODEL)
C047	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C048	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C201	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	(AEP MODEL)

When indicating parts by reference number, please include the board name.



Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C202	1-163-133-00	CERAMIC CHIP 47PF	5% 50V (AEP MODEL)	<u>DIODE</u>			
C203	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	D002	8-719-400-18	DIODE MA152WK	
C204	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	D003	8-719-104-34	DIODE 1S2836	
C205	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	D004	8-719-400-18	DIODE MA152WK	
C206	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	<u>DELAY LINE</u>			
C207	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	<u>FILTER</u>			
C208	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	FL001	1-409-470-11	FILTER, TRAP	
C209	1-163-118-00	CERAMIC CHIP 110PF	5% 50V (AEP MODEL)	FL002	1-415-719-11	DELAY LINE	
C210	1-163-103-00	CERAMIC CHIP 27PF	5% 50V (AEP MODEL)	<u>IC</u>			
C212	1-163-118-00	CERAMIC CHIP 110PF	5% 50V (AEP MODEL)	IC001	8-759-009-06	IC MC14052BF	
C213	1-163-103-00	CERAMIC CHIP 27PF	5% 50V (AEP MODEL)	IC002	8-759-009-07	IC MC14053BF	
C214	1-163-038-00	CERAMIC CHIP 0.1MF	25V (AEP MODEL)	IC003	8-759-009-07	IC MC14053BF	
C216	1-124-791-11	ELECT 1MF	20% 50V (AEP MODEL)	IC004	8-759-009-07	IC MC14053BF	
C217	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V (AEP MODEL)	IC201	8-752-035-00	IC CXA1227Q (AEP MODEL)	
C218	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V (AEP MODEL)	IC202	8-752-034-04	IC CXA1219M (AEP MODEL)	
C219	1-124-927-11	ELECT 4.7MF	20% 50V (AEP MODEL)	<u>COIL</u>			
C220	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L001	1-408-420-00	INDUCTOR 82UH	
C221	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L002	1-408-407-00	INDUCTOR 6.8UH	
C222	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	L004	1-408-417-00	INDUCTOR 47UH	
C223	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L005	1-408-418-00	INDUCTOR 56UH (AEP MODEL)	
C224	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	L006	1-408-421-00	INDUCTOR 100UH (AEP MODEL)	
C225	1-163-123-00	CERAMIC CHIP 180PF	5% 50V (AEP MODEL)	L007	1-408-418-00	INDUCTOR 56UH (AEP MODEL)	
C226	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	L008	1-408-419-00	INDUCTOR 68UH (AEP MODEL)	
C228	1-163-123-00	CERAMIC CHIP 180PF	5% 50V (AEP MODEL)	L009	1-408-418-00	INDUCTOR 56UH (AEP MODEL)	
C229	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	L201	1-408-408-00	INDUCTOR 8.2UH (AEP MODEL)	
C231	1-124-791-11	ELECT 1MF	20% 50V (AEP MODEL)	L202	1-408-408-00	INDUCTOR 8.2UH (AEP MODEL)	
C232	1-124-791-11	ELECT 1MF	20% 50V (AEP MODEL)	L203	1-408-410-00	INDUCTOR 12UH (AEP MODEL)	
C233	1-163-121-00	CERAMIC CHIP 150PF	5% 50V (AEP MODEL)	L204	1-408-410-00	INDUCTOR 12UH (AEP MODEL)	
C234	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V (AEP MODEL)	L205	1-408-409-00	INDUCTOR 10UH (AEP MODEL)	
C235	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	L206	1-408-409-00	INDUCTOR 10UH (AEP MODEL)	
C236	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L207	1-408-421-00	INDUCTOR 100UH (AEP MODEL)	
C237	1-126-233-11	ELECT 22MF	20% 25V (AEP MODEL)	L208	1-408-413-00	INDUCTOR 22UH (AEP MODEL)	
C238	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L209	1-408-413-00	INDUCTOR 22UH (AEP MODEL)	
C239	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	L301	1-408-417-00	INDUCTOR 47UH	
C241	1-126-233-11	ELECT 22MF	20% 25V (AEP MODEL)	<u>VARIABLE COIL</u>			
C242	1-163-125-00	CERAMIC CHIP 220PF	5% 50V (AEP MODEL)	LV201	1-408-530-00	COIL, VARIABLE (AEP MODEL)	
C243	1-163-125-00	CERAMIC CHIP 220PF	5% 50V (AEP MODEL)	LV202	1-408-532-00	COIL, VARIABLE (AEP MODEL)	
C301	1-126-233-11	ELECT 22MF	20% 25V	LV203	1-408-532-00	COIL, VARIABLE (AEP MODEL)	
C302	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	<u>TRANSISTOR</u>			
C303	1-164-232-11	CERAMIC CHIP 0.01MF	50V	Q001	8-729-216-22	TRANSISTOR 2SA1162	
C304	1-126-233-11	ELECT 22MF	20% 25V	Q002	8-729-216-22	TRANSISTOR 2SA1162	
C305	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q003	8-729-100-66	TRANSISTOR 2SC1623	
C306	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q004	8-729-100-66	TRANSISTOR 2SC1623	
C307	1-124-443-00	ELECT 100MF	20% 6.3V	Q005	8-729-100-66	TRANSISTOR 2SC1623	
C308	1-124-443-00	ELECT 100MF	20% 6.3V				
C309	1-126-233-11	ELECT 22MF	20% 25V				
C310	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
<u>CONNECTOR</u>							
CN001	1-506-469-11	PIN, CONNECTOR 4P					
CN002	1-506-469-11	PIN, CONNECTOR 4P					
CN003	1-568-078-11	CONNECTOR (RECEPTALE) 18P					
CN004	1-568-076-11	CONNECTOR (RECEPTALE) 14P					

When indicating parts by reference number, please include the board name.

# YC-64

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q006	8-729-100-66	TRANSISTOR 2SC1623		R020	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q007	8-729-100-66	TRANSISTOR 2SC1623		R021	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q008	8-729-100-66	TRANSISTOR 2SC1623		R022	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q009	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R023	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q010	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R024	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q011	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R025	1-216-073-00	METAL GLAZE 10K 5% 1/10W (AEP MODEL)	
Q012	8-729-100-66	TRANSISTOR 2SC1623		R026	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q013	8-729-100-66	TRANSISTOR 2SC1623		R027	1-216-041-00	METAL GLAZE 470 5% 1/10W (AEP MODEL)	
Q014	8-729-100-66	TRANSISTOR 2SC1623		R028	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (AEP MODEL)	
Q015	8-729-100-66	TRANSISTOR 2SC1623		R029	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W (AEP MODEL)	
Q016	8-729-100-66	TRANSISTOR 2SC1623		R030	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q017	8-729-100-66	TRANSISTOR 2SC1623		R040	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q018	8-729-100-66	TRANSISTOR 2SC1623		R041	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q019	8-729-100-66	TRANSISTOR 2SC1623		R042	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q020	8-729-100-62	TRANSISTOR 2SC1623 (AEP MODEL)		R043	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W (AEP MODEL)	
Q021	8-729-901-01	TRANSISTOR DTC144EK (AEP MODEL)		R044	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q022	8-729-901-01	TRANSISTOR DTC144EK		R045	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q023	8-729-216-22	TRANSISTOR 2SA1162 (AEP MODEL)		R046	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q024	8-729-100-66	TRANSISTOR 2SC1623		R047	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q025	8-729-100-66	TRANSISTOR 2SC1623		R048	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q026	8-729-100-66	TRANSISTOR 2SC1623		R049	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q027	8-729-100-66	TRANSISTOR 2SC1623		R050	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q028	8-729-100-66	TRANSISTOR 2SC1623		R051	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q029	8-729-100-66	TRANSISTOR 2SC1623		R052	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q030	8-729-100-66	TRANSISTOR 2SC1623		R053	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q031	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R054	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q032	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R055	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q201	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R056	1-216-035-00	METAL GLAZE 270 5% 1/10W	
Q202	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R057	1-216-017-00	METAL GLAZE 47 5% 1/10W	
Q203	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R058	1-216-039-00	METAL GLAZE 390 5% 1/10W	
Q301	8-729-100-66	TRANSISTOR 2SC1623		R059	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q302	8-729-100-66	TRANSISTOR 2SC1623		R060	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q303	8-729-100-66	TRANSISTOR 2SC1623		R061	1-216-045-00	METAL GLAZE 680 5% 1/10W	
Q304	8-729-100-66	TRANSISTOR 2SC1623		R062	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
RESISTOR				R063	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R001	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R064	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R002	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R065	1-216-081-00	METAL GLAZE 22K 5% 1/10W (AEP MODEL)	
R003	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R066	1-216-089-00	METAL GLAZE 47K 5% 1/10W (AEP MODEL)	
R004	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R067	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (AEP MODEL)	
R005	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R068	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R006	1-216-041-00	METAL GLAZE 470 5% 1/10W		R069	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R007	1-216-041-00	METAL GLAZE 470 5% 1/10W		R070	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R009	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R071	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R010	1-216-042-00	METAL GLAZE 510 5% 1/10W		R072	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R011	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		R073	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R012	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W		R074	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R013	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R075	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R014	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R076	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R015	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R077	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R016	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R078	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R018	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R079	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R019	1-216-042-00	METAL GLAZE 510 5% 1/10W		R080	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R081	1-216-049-00	METAL GLAZE 1K 5% 1/10W	

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R082	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R311	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R083	1-216-049-00	METAL GLAZE	1K 5% 1/10W			VARIABLE RESISTOR	
R084	1-216-073-00	METAL GLAZE	10K 5% 1/10W	RV201	1-228-996-00	RES, ADJ, CARBON 47K (AEP MODEL)	
R085	1-216-049-00	METAL GLAZE	1K 5% 1/10W	RV202	1-228-994-00	RES, ADJ, CARBON 10K (AEP MODEL)	
R086	1-216-049-00	METAL GLAZE	1K 5% 1/10W	RV203	1-228-994-00	RES, ADJ, CARBON 10K (AEP MODEL)	
						CRYSTAL	
R087	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X201	1-577-117-21	VIBRATOR, CRYSTAL (4.43MHz) (AEP MODEL)	
R088	1-216-081-00	METAL GLAZE	22K 5% 1/10W (AEP MODEL)			*****	
R089	1-216-045-00	METAL GLAZE	680 5% 1/10W (AEP MODEL)			*A-7061-940-A PC-39 (A) BOARD, COMPLETE	
R090	1-216-045-00	METAL GLAZE	680 5% 1/10W (AEP MODEL)			*****	
R091	1-216-049-00	METAL GLAZE	1K 5% 1/10W (AEP MODEL)			CAPACITOR	
R092	1-216-045-00	METAL GLAZE	680 5% 1/10W (AEP MODEL)				
R093	1-216-045-00	METAL GLAZE	680 5% 1/10W (AEP MODEL)				
R094	1-216-047-00	METAL GLAZE	820 5% 1/10W (AEP MODEL)				
R095	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R096	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R097	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R098	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R099	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R100	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R201	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W (AEP MODEL)				
R202	1-216-073-00	METAL GLAZE	10K 5% 1/10W (AEP MODEL)				
R203	1-216-039-00	METAL GLAZE	390 5% 1/10W (AEP MODEL)				
R204	1-216-039-00	METAL GLAZE	390 5% 1/10W (AEP MODEL)				
R206	1-216-039-00	METAL GLAZE	390 5% 1/10W (AEP MODEL)				
R207	1-216-039-00	METAL GLAZE	390 5% 1/10W (AEP MODEL)				
R208	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W (AEP MODEL)				
R209	1-216-097-00	METAL GLAZE	100K 5% 1/10W (AEP MODEL)				
R210	1-216-121-00	METAL GLAZE	1M 5% 1/10W (AEP MODEL)				
R211	1-216-079-00	METAL GLAZE	18K 5% 1/10W (AEP MODEL)				
R212	1-216-128-11	METAL GLAZE	2M 5% 1/10W (AEP MODEL)				
R213	1-216-077-00	METAL GLAZE	15K 5% 1/10W (AEP MODEL)				
R214	1-216-060-00	METAL GLAZE	3K 5% 1/10W (AEP MODEL)				
R215	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W (AEP MODEL)				
R216	1-216-060-00	METAL GLAZE	3K 5% 1/10W (AEP MODEL)				
R217	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W (AEP MODEL)				
R218	1-216-077-00	METAL GLAZE	15K 5% 1/10W (AEP MODEL)				
R219	1-216-295-00	METAL GLAZE	0 5% 1/10W (AEP MODEL)				
R220	1-216-295-00	METAL GLAZE	0 5% 1/10W (AEP MODEL)				
R221	1-216-685-11	METAL CHIP	27K 0.50% 1/10W (AEP MODEL)				
R222	1-216-049-00	METAL GLAZE	1K 5% 1/10W (AEP MODEL)				
R223	1-216-049-00	METAL GLAZE	1K 5% 1/10W (AEP MODEL)				
R225	1-216-073-00	METAL GLAZE	10K 5% 1/10W (AEP MODEL)				
R226	1-216-081-00	METAL GLAZE	22K 5% 1/10W (AEP MODEL)				
R301	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R302	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R303	1-216-035-00	METAL GLAZE	270 5% 1/10W				
R304	1-216-017-00	METAL GLAZE	47 5% 1/10W				
R305	1-216-039-00	METAL GLAZE	390 5% 1/10W				
R306	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R307	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R308	1-216-045-00	METAL GLAZE	680 5% 1/10W				
R309	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R310	1-216-045-00	METAL GLAZE	680 5% 1/10W				

When indicating parts by reference number, please include the board name.

# PC-39

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C529	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C650	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V
C530	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C651	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C531	1-124-927-11	ELECT 4.7MF	20% 50V	C652	1-131-389-91	TANTALUM 10MF	10% 3.15V
C535	1-123-875-11	ELECT 10MF	20% 50V	C653	1-131-343-00	TANTALUM 0.22MF	10% 35V
C536	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C654	1-124-443-00	ELECT 100MF	20% 6.3V
C537	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C655	1-126-233-11	ELECT 22MF	20% 25V
C538	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C656	1-124-443-00	ELECT 100MF	20% 6.3V
C539	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C657	1-123-875-11	ELECT 10MF	20% 50V
C540	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C658	1-124-443-00	ELECT 100MF	20% 6.3V
C542	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C659	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V
C556	1-124-927-11	ELECT 4.7MF	20% 50V	C660	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C557	1-161-051-00	CERAMIC 0.01MF	10% 25V	C661	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C558	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C662	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C601	1-126-176-11	ELECT 220MF	20% 6.3V	C663	1-124-446-11	ELECT 47MF	20% 10V
C602	1-126-176-11	ELECT 220MF	20% 6.3V	C664	1-124-925-11	ELECT 2.2MF	20% 50V
C603	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C665	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V
C604	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C666	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C611	1-124-791-11	ELECT 1MF	20% 50V	C667	1-131-389-91	TANTALUM 10MF	10% 3.15V
C612	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C668	1-131-343-00	TANTALUM 0.22MF	10% 35V
C613	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C669	1-124-443-00	ELECT 100MF	20% 6.3V
C614	1-124-791-11	ELECT 1MF	20% 50V	C670	1-126-233-11	ELECT 22MF	20% 25V
C615	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C671	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C616	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C672	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C617	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C673	1-123-875-11	ELECT 10MF	20% 50V
C618	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C674	1-123-875-11	ELECT 10MF	20% 50V
C619	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C703	1-123-875-11	ELECT 10MF	20% 50V
C620	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C704	1-126-157-11	ELECT 10MF	20% 16V
C621	1-126-176-11	ELECT 220MF	20% 6.3V	C705	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C623	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C706	1-124-443-00	ELECT 100MF	20% 6.3V
C624	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C707	1-124-443-00	ELECT 100MF	20% 6.3V
C625	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C708	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C626	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C710	1-124-443-00	ELECT 100MF	20% 6.3V
C627	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C712	1-126-157-11	ELECT 10MF	20% 16V
C628	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C713	1-126-157-11	ELECT 10MF	20% 16V
C629	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C714	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C630	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C715	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C631	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C716	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C632	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C717	1-124-443-00	ELECT 100MF	20% 6.3V
C633	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C731	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C634	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C734	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C635	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C735	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C636	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C736	1-124-443-00	ELECT 100MF	20% 6.3V
C638	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V	C737	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C640	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V	C739	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C641	1-124-443-00	ELECT 100MF	20% 6.3V	C740	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C642	1-123-875-11	ELECT 10MF	20% 50V	C741	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C643	1-124-443-00	ELECT 100MF	20% 6.3V	C742	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C644	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V	C743	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C645	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C744	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C646	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C745	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C647	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C746	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C648	1-124-446-11	ELECT 47MF	20% 10V	C747	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C649	1-124-925-11	ELECT 2.2MF	20% 50V	C748	1-163-035-00	CERAMIC CHIP 0.047MF	50V

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Ref.No	Part No.	Description		Remark	Ref.No	Part No.	Description		Remark
C749	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C834	1-124-443-00	ELECT 100MF	20%	6.3V
C750	1-126-177-11	ELECT 100MF	20%	6.3V	C836	1-163-123-00	CERAMIC CHIP 180PF	5%	50V
C752	1-126-157-11	ELECT 10MF	20%	16V	C837	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C755	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C838	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C756	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C840	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C757	1-124-499-11	ELECT 1MF	20%	50V	C841	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C758	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C850	1-123-875-11	ELECT 10MF	20%	50V
C759	1-163-093-00	CERAMIC CHIP 10PF	5%	50V	C851	1-123-875-11	ELECT 10MF	20%	50V
C760	1-163-091-00	CERAMIC CHIP 8PF	0.25PF	50V	C852	1-123-875-11	ELECT 10MF	20%	50V
C761	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C854	1-123-875-11	ELECT 10MF	20%	50V
C762	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C855	1-123-875-11	ELECT 10MF	20%	50V
C763	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C856	1-123-875-11	ELECT 10MF	20%	50V
C764	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C857	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C765	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C858	1-124-927-11	ELECT 4.7MF	20%	50V
C766	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	C859	1-124-446-11	ELECT 47MF	20%	10V
C767	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C860	1-123-875-11	ELECT 10MF	20%	50V
C768	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C861	1-123-875-11	ELECT 10MF	20%	50V
C769	1-124-443-00	ELECT 100MF	20%	6.3V	C862	1-124-446-11	ELECT 47MF	20%	10V
C771	1-124-446-11	ELECT 47MF	20%	10V	C865	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C772	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C866	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C773	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C867	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C775	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C868	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C801	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C869	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C802	1-124-443-00	ELECT 100MF	20%	6.3V	C870	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C803	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C871	1-123-875-11	ELECT 10MF	20%	50V
C804	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C880	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C805	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C901	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C806	1-124-791-11	ELECT 1MF	20%	50V	C902	1-124-443-00	ELECT 100MF	20%	6.3V
C807	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	C903	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C808	1-124-902-71	ELECT 0.47MF	20%	50V	C904	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C809	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V	C905	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C810	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V	C906	1-124-791-11	ELECT 1MF	20%	50V
C811	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C907	1-163-137-00	CERAMIC CHIP 680PF	5%	50V
C812	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	C908	1-124-902-00	ELECT 0.47MF	20%	50V
C813	1-124-443-00	ELECT 100MF	20%	6.3V	C909	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C814	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C910	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C815	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C911	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C816	1-124-925-11	ELECT 2.2MF	20%	50V	C912	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C817	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	C913	1-124-443-00	ELECT 100MF	20%	6.3V
C819	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	C914	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C821	1-124-791-11	ELECT 1MF	20%	50V	C915	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C822	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	C916	1-124-925-11	ELECT 2.2MF	20%	50V
C823	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	C917	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C824	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C919	1-163-005-11	CERAMIC CHIP 470PF	10%	50V
C825	1-162-587-11	CERAMIC CHIP 0.039MF	10%	25V	C921	1-124-791-11	ELECT 1MF	20%	50V
C826	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	C922	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C827	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V	C923	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C828	1-131-343-00	TANTALUM 0.22MF	10%	35V	C924	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C829	1-131-389-91	TANTALUM 10MF	10%	3.15V	C925	1-162-587-11	CERAMIC CHIP 0.039MF	10%	25V
C830	1-123-875-11	ELECT 10MF	20%	50V	C926	1-163-137-00	CERAMIC CHIP 680PF	5%	50V
C831	1-126-233-11	ELECT 22MF	20%	25V	C927	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V
C832	1-124-443-00	ELECT 100MF	20%	6.3V	C928	1-131-343-00	TANTALUM 0.22MF	10%	35V
C833	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C929	1-131-389-91	TANTALUM 10MF	10%	3.15V

When indicating parts by reference number, please include the board name.



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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C930	1-123-875-11	ELECT 10MF	20% 50V	IC602	8-759-111-56	IC UPC4572G2	
C931	1-126-233-11	ELECT 22MF	20% 25V	IC603	8-759-009-07	IC MC14053BF	
C932	1-124-443-00	ELECT 100MF	20% 6.3V	IC604	8-759-111-56	IC UPC4572G2	
C933	1-163-035-00	CERAMIC CHIP 0.047MF	50V	IC605	8-759-009-06	IC MC14052BF	
C934	1-124-443-00	ELECT 100MF	20% 6.3V	IC606	8-759-111-56	IC UPC4572G2	
C936	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	IC607	8-759-111-56	IC UPC4572G2	
C937	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	IC608	8-759-009-07	IC MC14053BF	
C938	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	IC609	8-759-009-07	IC MC14053BF	
C940	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC610	8-759-009-06	IC MC14052BF	
C941	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC611	8-759-009-06	IC MC14052BF	
C951	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	IC612	8-759-009-07	IC MC14053BF	
C952	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	IC613	8-759-111-56	IC UPC4572G2	
C953	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	IC614	8-752-009-90	IC CX20099	
C954	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	IC615	8-759-009-06	IC MC14052BF	
C955	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	IC701	8-752-322-57	IC CXD1077M	
C956	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	IC703	8-752-332-46	IC CXD1208Q	
C957	1-123-875-11	ELECT 10MF	20% 50V	IC704	8-759-009-51	IC MC14538BF	
<u>CONNECTOR</u>				IC705	8-759-945-09	IC MB8464-12LLPF	
CN601	1-568-084-11	CONNECTOR (RECEPTALE) 30P		IC705	8-759-979-96	IC MB8464A-15LLPF	
CN602	1-568-084-11	CONNECTOR (RECEPTALE) 30P		IC707	8-759-990-94	IC MB606199	
CN603	1-506-477-11	PIN, CONNECTOR 12P		IC708	8-752-010-20	IC CX20102	
CN604	1-506-470-11	PIN, CONNECTOR 5P		IC709	8-759-908-15	IC TL431CLP	
CN605	1-506-471-11	PIN, CONNECTOR 6P		IC801	8-752-033-01	IC CXA1237AR	
CN606	1-506-468-11	PIN, CONNECTOR 3P		IC850	8-759-111-56	IC UPC4572G2	
CN701	1-506-468-11	PIN, CONNECTOR 3P		IC901	8-752-033-01	IC CXA1237AR	
<u>TRIMMER</u>				IC902	8-759-009-06	IC MC14052BF	
CV701	1-141-227-00	CAP, CERAMIC TRIMMER		IC903	8-759-009-06	IC MC14052BF	
<u>DIODE</u>				IC904	8-759-111-56	IC UPC4572G2	
D401	8-719-400-18	DIODE MA152WK		IC905	8-759-111-56	IC UPC4572G2	
D501	8-719-104-34	DIODE 1S2836		IC906	8-759-111-56	IC UPC4572G2	
D502	8-719-400-18	DIODE MA152WK		<u>COIL</u>			
D503	8-719-800-76	DIODE 1SS226		L401	1-407-169-XX	INDUCTOR 100UH	
D610	8-719-104-34	DIODE 1S2836		L501	1-408-978-21	INDUCTOR 47UH	
D701	8-719-400-18	DIODE MA152WK		L702	1-408-970-21	INDUCTOR 10UH	
D702	8-719-400-18	DIODE MA152WK		L704	1-407-169-XX	INDUCTOR 100UH	
D703	8-713-300-88	DIODE 1T33C-01		L705	1-407-169-XX	INDUCTOR 100UH	
D850	8-719-104-34	DIODE 1S2836		L706	1-408-970-21	INDUCTOR 10UH	
D851	8-719-800-76	DIODE 1SS226		L707	1-408-970-21	INDUCTOR 10UH	
D852	8-719-800-76	DIODE 1SS226		L801	1-407-169-XX	INDUCTOR 100UH	
<u>FILTER</u>				L802	1-408-948-00	INDUCTOR 220UH	
FL601	1-235-565-21	FILTER, LOW PASS		L901	1-407-169-XX	INDUCTOR 100UH	
FL602	1-235-565-21	FILTER, LOW PASS		L902	1-408-948-00	INDUCTOR 220UH	
FL801	1-236-551-11	BPF		<u>TRANSISTOR</u>			
FL901	1-236-550-11	BPF		Q501	8-729-100-66	TRANSISTOR 2SC1623	
<u>IC</u>				Q502	8-729-901-01	TRANSISTOR DTC144EK	
IC401	8-752-334-42	IC CXD2106Q		Q503	8-729-100-66	TRANSISTOR 2SC1623	
IC501	8-759-100-93	IC UPC39362		Q504	8-729-902-XX	TRANSISTOR DTC114TK	
				Q505	8-729-901-01	TRANSISTOR DTC144EK	
				Q506	8-729-216-22	TRANSISTOR 2SA1162	
				Q508	8-729-100-66	TRANSISTOR 2SC1623	
				Q509	8-729-903-10	TRANSISTOR FMW1	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q510	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R155	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q511	8-729-100-66	TRANSISTOR 2SC1623		R401	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
Q512	8-729-100-66	TRANSISTOR 2SC1623		R402	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
Q513	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R403	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
Q514	8-729-216-22	TRANSISTOR 2SA1162		R404	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
Q515	8-729-100-66	TRANSISTOR 2SC1623		R405	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
Q516	8-729-100-66	TRANSISTOR 2SC1623		R406	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q517	8-729-100-66	TRANSISTOR 2SC1623		R407	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q518	8-729-901-06	TRANSISTOR DTA144EK		R408	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q520	8-729-901-01	TRANSISTOR DTC144EK		R409	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q521	8-729-901-06	TRANSISTOR DTA144EK		R412	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q522	8-729-901-01	TRANSISTOR DTC144EK		R413	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q523	8-729-901-01	TRANSISTOR DTC144EK		R501	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q524	8-729-100-66	TRANSISTOR 2SC1623		R502	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
Q526	8-729-100-66	TRANSISTOR 2SC1623		R503	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
Q601	8-729-901-06	TRANSISTOR DTA144EK		R504	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
Q602	8-729-116-05	TRANSISTOR 2SK160-K5		R505	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q603	8-729-116-05	TRANSISTOR 2SK160-K5		R506	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q604	8-729-901-01	TRANSISTOR DTC144EK		R507	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
Q605	8-729-901-01	TRANSISTOR DTC144EK		R508	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q606	8-729-216-22	TRANSISTOR 2SA1162		R509	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q607	8-729-216-22	TRANSISTOR 2SA1162		R510	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q610	8-729-901-01	TRANSISTOR DTC144EK		R511	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q611	8-729-100-66	TRANSISTOR 2SC1623		R512	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
Q701	8-729-901-06	TRANSISTOR DTA144EK		R513	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q702	8-729-901-01	TRANSISTOR DTC144EK		R514	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
Q703	8-729-100-66	TRANSISTOR 2SC1623		R515	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
Q705	8-729-100-66	TRANSISTOR 2SC1623		R516	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q706	8-729-100-66	TRANSISTOR 2SC1623		R517	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q707	8-729-100-66	TRANSISTOR 2SC1623		R519	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q708	8-729-901-06	TRANSISTOR DTA144EK		R520	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q709	8-729-100-66	TRANSISTOR 2SC1623		R521	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q720	8-729-901-01	TRANSISTOR DTC144EK		R522	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q721	8-729-901-01	TRANSISTOR DTC144EK		R523	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
Q801	8-729-901-01	TRANSISTOR DTC144EK		R524	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q802	8-729-901-01	TRANSISTOR DTC144EK		R526	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
Q840	8-729-100-66	TRANSISTOR 2SC1623		R527	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q851	8-729-902-96	TRANSISTOR FMS1		R529	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q852	8-729-904-04	TRANSISTOR FMS2		R530	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
Q853	8-729-100-66	TRANSISTOR 2SC1623		R531	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
Q854	8-729-100-66	TRANSISTOR 2SC1623		R532	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q855	8-729-100-66	TRANSISTOR 2SC1623		R533	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q856	8-729-100-66	TRANSISTOR 2SC1623		R534	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q901	8-729-901-01	TRANSISTOR DTC144EK		R535	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q902	8-729-901-01	TRANSISTOR DTC144EK		R536	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
Q940	8-729-100-66	TRANSISTOR 2SC1623		R537	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
<u>RESISTOR</u>				R538	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R150	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		R539	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R151	1-216-025-00	METAL GLAZE 100 5% 1/10W		R540	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R152	1-216-295-00	METAL GLAZE 0 5% 1/10W		R542	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R153	1-216-295-00	METAL GLAZE 0 5% 1/10W		R543	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R154	1-216-295-00	METAL GLAZE 0 5% 1/10W		R544	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
				R545	1-216-089-00	METAL GLAZE 47K 5% 1/10W	

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R546	1-216-062-00	METAL GLAZE 3.6K 5%	1/10W	R644	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R547	1-216-748-11	METAL GLAZE 39K 5%	1/10W	R645	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R548	1-216-062-00	METAL GLAZE 3.6K 5%	1/10W	R646	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R549	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R647	1-216-033-00	METAL GLAZE 220 5%	1/10W
R550	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R648	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R551	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R649	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R553	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R650	1-216-748-11	METAL GLAZE 39K 5%	1/10W
R555	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R651	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R571	1-216-041-00	METAL GLAZE 470 5%	1/10W	R653	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R580	1-216-025-00	METAL GLAZE 100 5%	1/10W	R654	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R581	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R655	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R582	1-216-075-00	METAL GLAZE 12K 5%	1/10W	R659	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R583	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R660	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R584	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R661	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R585	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R662	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R586	1-216-041-00	METAL GLAZE 470 5%	1/10W	R663	1-216-025-00	METAL GLAZE 100 5%	1/10W
R587	1-216-295-00	METAL GLAZE 0 5%	1/10W	R664	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R588	1-216-295-00	METAL GLAZE 0 5%	1/10W	R665	1-216-009-00	METAL GLAZE 22 5%	1/10W
R607	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R666	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R608	1-216-105-00	METAL GLAZE 220K 5%	1/10W	R667	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R609	1-216-105-00	METAL GLAZE 220K 5%	1/10W	R668	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R610	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R669	1-216-045-00	METAL GLAZE 680 5%	1/10W
R611	1-216-105-00	METAL GLAZE 220K 5%	1/10W	R670	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R612	1-216-105-00	METAL GLAZE 220K 5%	1/10W	R671	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R613	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R672	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R614	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R673	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R616	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R674	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R617	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R675	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R618	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R676	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R619	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R677	1-216-025-00	METAL GLAZE 100 5%	1/10W
R621	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R678	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R622	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R679	1-216-009-00	METAL GLAZE 22 5%	1/10W
R623	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R680	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R624	1-216-025-00	METAL GLAZE 100 5%	1/10W	R681	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R625	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R682	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R626	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R683	1-216-045-00	METAL GLAZE 680 5%	1/10W
R627	1-216-033-00	METAL GLAZE 220 5%	1/10W	R684	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R628	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R685	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R629	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R686	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R630	1-216-025-00	METAL GLAZE 100 5%	1/10W	R687	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R631	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R688	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R632	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R689	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R633	1-216-033-00	METAL GLAZE 220 5%	1/10W	R690	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R634	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R691	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
R635	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R693	1-216-001-00	METAL GLAZE 10 5%	1/10W
R636	1-216-025-00	METAL GLAZE 100 5%	1/10W	R695	1-216-025-00	METAL GLAZE 100 5%	1/10W
R637	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R696	1-216-025-00	METAL GLAZE 100 5%	1/10W
R638	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R697	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R639	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R698	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R640	1-216-033-00	METAL GLAZE 220 5%	1/10W	R701	1-216-029-00	METAL GLAZE 150 5%	1/10W
R641	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R702	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
R642	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R703	1-216-661-11	METAL CHIP 2.7K 0.50%	1/10W
R643	1-216-025-00	METAL GLAZE 100 5%	1/10W	R704	1-216-022-00	METAL GLAZE 75 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R705	1-216-039-00	METAL GLAZE	390	5%	1/10W	R783	1-216-081-00	MÉTAL GLAZE	22K	5%	1/10W
R706	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R784	1-216-025-00	METAL GLAZE	100	5%	1/10W
R707	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R785	1-216-025-00	METAL GLAZE	100	5%	1/10W
R708	1-216-748-11	METAL GLAZE	39K	5%	1/10W	R787	1-216-295-00	METAL GLAZE	0	5%	1/10W
R712	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R788	1-216-295-00	METAL GLAZE	0	5%	1/10W
R713	1-216-748-11	METAL GLAZE	39K	5%	1/10W	R789	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R717	1-216-117-00	METAL GLAZE	680K	5%	1/10W	R790	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R718	1-216-105-00	METAL GLAZE	220K	5%	1/10W	R791	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R720	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R792	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R721	1-216-101-00	METAL GLAZE	150K	5%	1/10W	R793	1-216-001-00	METAL GLAZE	10	5%	1/10W
R723	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R794	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R724	1-216-295-00	METAL GLAZE	0	5%	1/10W	R795	1-216-295-00	METAL GLAZE	0	5%	1/10W
R726	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R797	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R727	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R798	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R729	1-216-295-00	METAL GLAZE	0	5%	1/10W	R799	1-216-029-00	METAL GLAZE	150	5%	1/10W
R732	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	R801	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R738	1-216-017-00	METAL GLAZE	47	5%	1/10W	R802	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R739	1-216-645-11	METAL CHIP	560	0.50%	1/10W	R803	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R740	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	R804	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R741	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	R805	1-216-295-00	METAL GLAZE	0	5%	1/10W
R742	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	R806	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R743	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R807	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R744	1-216-295-00	METAL GLAZE	0	5%	1/10W	R808	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R745	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R809	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R746	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R810	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R748	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R811	1-216-107-00	METAL GLAZE	270K	5%	1/10W
R749	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R812	1-216-046-00	METAL GLAZE	750	5%	1/10W
R750	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R813	1-216-046-00	METAL GLAZE	750	5%	1/10W
R751	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R814	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R752	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R815	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R753	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R816	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R754	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R817	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R755	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R818	1-216-045-00	METAL GLAZE	680	5%	1/10W
R756	1-216-025-00	METAL GLAZE	100	5%	1/10W	R819	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R757	1-216-037-00	METAL GLAZE	330	5%	1/10W	R820	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R758	1-216-029-00	METAL GLAZE	150	5%	1/10W	R821	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R759	1-216-045-00	METAL GLAZE	680	5%	1/10W	R822	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R760	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R823	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R761	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R824	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R762	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R827	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R763	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R828	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R764	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R829	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R768	1-216-105-00	METAL GLAZE	220K	5%	1/10W	R830	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R769	1-216-105-00	METAL GLAZE	220K	5%	1/10W	R831	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R771	1-216-105-00	METAL GLAZE	220K	5%	1/10W	R833	1-216-047-00	METAL GLAZE	820	5%	1/10W
R772	1-216-295-00	METAL GLAZE	0	5%	1/10W	R840	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R774	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R841	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R775	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R842	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R776	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R850	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R777	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R851	1-216-043-00	METAL GLAZE	560	5%	1/10W
R780	1-216-045-00	METAL GLAZE	680	5%	1/10W	R852	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R781	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R853	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R782	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R854	1-216-075-00	METAL GLAZE	12K	5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R855	1-216-043-00	METAL GLAZE	560 5% 1/10W	R928	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R856	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R929	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R857	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R930	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R858	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R931	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R859	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R933	1-216-047-00	METAL GLAZE	820 5% 1/10W
R860	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R940	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R861	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R941	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R862	1-216-109-00	METAL GLAZE	330K 5% 1/10W	R942	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R863	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R952	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R864	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R953	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R865	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R954	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R866	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R955	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R867	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R956	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R868	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R957	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R869	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R958	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R870	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R959	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R871	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R960	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R872	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R961	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R873	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R962	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R874	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R963	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R875	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R964	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R876	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R965	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R877	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R966	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R878	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R967	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R879	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R968	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R880	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R969	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R881	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R970	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R885	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R971	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R886	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R972	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R901	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R973	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R902	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R984	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R903	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	VARIABLE RESISTOR			
R904	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	RV701	1-228-995-00	RES, ADJ, CARBON	22K
R905	1-216-295-00	METAL GLAZE	0 5% 1/10W	RV702	1-228-995-00	RES, ADJ, CARBON	22K
R906	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	RV703	1-228-999-00	RES, ADJ, CARBON	470K
R907	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	RV705	1-228-999-00	RES, ADJ, CARBON	470K
R908	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	RV707	1-228-991-00	RES, ADJ, CARBON	2.2K
R909	1-216-049-00	METAL GLAZE	1K 5% 1/10W	RV708	1-228-997-00	RES, ADJ, CARBON	100K
R910	1-216-121-00	METAL GLAZE	1M 5% 1/10W	RV709	1-228-994-00	RES, ADJ, CARBON	10K
R911	1-216-107-00	METAL GLAZE	270K 5% 1/10W	RV801	1-228-994-00	RES, ADJ, CARBON	10K
R912	1-216-047-00	METAL GLAZE	820 5% 1/10W	RV802	1-228-996-00	RES, ADJ, CARBON	47K
R913	1-216-047-00	METAL GLAZE	820 5% 1/10W	RV901	1-228-994-00	RES, ADJ, CARBON	10K
R915	1-216-075-00	METAL GLAZE	12K 5% 1/10W	RV902	1-228-995-00	RES, ADJ, CARBON	22K
R916	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	RV951	1-228-994-00	RES, ADJ, CARBON	10K
R917	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	RV952	1-228-995-00	RES, ADJ, CARBON	22K
R918	1-216-045-00	METAL GLAZE	680 5% 1/10W	RV953	1-228-994-00	RES, ADJ, CARBON	10K
R919	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	RV954	1-228-995-00	RES, ADJ, CARBON	22K
R920	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	CRYSTAL			
R921	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	X401	1-567-504-11	OSCILLATOR, CRYSTAL	(4.43MHz)
R922	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
R923	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R924	1-216-079-00	METAL GLAZE	18K 5% 1/10W				
R927	1-216-079-00	METAL GLAZE	18K 5% 1/10W				

When indicating parts by reference number, please include the board name.



## UC-4

## CC-26

## FP-237

## FP-90

## NM-2

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
	*1-633-519-11	UC-4 BOARD *****				TRANSISTOR	
		CONNECTOR		Q302	8-729-906-48	EE-TP109	
						SWITCH	
CN101	1-566-529-11	CONNECTOR, FPC (ZIF) 13P		S302	1-572-298-21	SWITCH, PUSH(3 KEY)REC PROOF TAPE SELECT	
CN102	1-566-527-21	CONNECTOR, FPC (ZIF) 11P				*****	
CN103	1-566-530-21	CONNECTOR, FPC (ZIF) 14P				*A-7061-899-A NM-2 (A) BOARD, COMPLETE (UK MODEL)	
CN103	1-575-392-11	CABLE, FLAT (1.0MM PITCH) 14P				*****	
		DIODE				CAPACITOR	
D101	8-719-104-34	DIODE 1S2836		C001	1-163-035-00	CERAMIC CHIP 0.047MF	50V
D102	8-719-104-34	DIODE 1S2836		C002	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
D103	8-719-104-34	DIODE 1S2836		C003	1-163-035-00	CERAMIC CHIP 0.047MF	50V
D104	8-719-104-34	DIODE 1S2836		C004	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
		*****		C005	1-135-155-21	TANTAL CHIP 4.7MF	10% 16V
	*1-633-518-11	CC-26 BOARD *****		C006	1-135-155-21	TANTAL CHIP 4.7MF	10% 16V
		CONNECTOR		C007	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
CN301	*1-562-880-21	CONNECTOR, CARD EDGE 15P		C008	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
		CONNECTOR		C011	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
W301	1-575-393-11	CABLE, FLAT (1.0MM PITCH) 15P		C012	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
		*****				CONNECTOR	
	1-633-660-11	FP-237 FLEXIBLE BOARD *****		CN001	1-506-469-11	PIN, CONNECTOR 4P	
	3-728-869-02	HOLDER, SENSOR		CN002	1-506-477-11	PIN, CONNECTOR 12P	
		DIODE				DIODE	
D301	8-719-820-44	PHOTO COUPLER TLP907-0		D001	8-719-800-76	DIODE 1SS126	
		TRANSISTOR		D002	8-719-400-18	DIODE MA152WK	
Q301	8-729-906-48	EE-TP109		D003	8-719-104-34	DIODE 1S2836	
		SWITCH				IC	
S301	1-572-173-11	SWITCH, SLIDE (ENCODER) MODE		IC001	8-759-009-07	IC MC14053BF	
S303	1-570-869-21	SWITCH, PUSH (2 KEY) THICKNESS				JUMPER RESISTOR	
S901	1-571-099-11	SWITCH (CASSETTE DOWN)		JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		*****		JR002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	1-628-061-12	FP-90 FLEXIBLE BOARD *****		JR003	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	3-728-837-01	HOLDER, LED		JR004	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	3-728-869-02	HOLDER, SENSOR		JR005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		DIODE		JR006	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D302	8-719-940-81	DIODE GL452S		JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D303	8-719-820-44	PHOTO COUPLER TLP907-0		JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR009	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR010	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR011	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR012	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR013	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR014	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR015	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR016	1-216-296-00	METAL GLAZE 0 5% 1/8W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				
JR017	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR018	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR019	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR020	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR021	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR022	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR023	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR024	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR025	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR026	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR027	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR028	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR029	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR030	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR031	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR032	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR033	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR034	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR035	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR036	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR037	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR038	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR039	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR040	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR041	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR042	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR043	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR044	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR045	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR046	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR047	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR048	1-216-296-00	METAL GLAZE	0	5%	1/8W	

## COIL

L001	1-408-408-00	INDUCTOR	8.2UH		
L002	△.1-408-408-00	INDUCTOR	8.2UH		

## CASE BLOCK

NM001 \*A-6771-194-A CASE BLOCK ASSY, NA

## TRANSISTOR

Q003	8-729-901-01	TRANSISTOR DTC144EK			
Q004	8-729-901-01	TRANSISTOR DTC144EK			
Q005	8-729-901-01	TRANSISTOR DTC144EK			
Q006	8-729-901-01	TRANSISTOR DTC144EK			
Q007	8-729-901-01	TRANSISTOR DTC144EK			
Q008	8-729-901-01	TRANSISTOR DTC144EK			
Q009	8-729-901-01	TRANSISTOR DTC144EK			
Q010	8-729-901-01	TRANSISTOR DTC144EK			

## RESISTOR

R001	1-216-089-00	METAL GLAZE	47K	5%	1/10W
------	--------------	-------------	-----	----	-------

Ref.No	Part No.	Description				Remark
R002	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R003	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R004	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R006	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R007	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R008	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R009	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R010	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R011	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R012	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R013	1-216-296-00	METAL GLAZE	0	5%	1/8W	
R014	1-216-296-00	METAL GLAZE	0	5%	1/8W	
R015	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R016	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R019	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R021	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R022	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R023	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R025	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R027	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R028	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R029	1-216-089-00	METAL GLAZE	47K	5%	1/10W	

## MISCELLANEOUS

\*\*\*\*\*

A-7049-293-A DRUM ASSY, ROTARY UPPER (DGU-58A)  
 △.1-466-199-11 MODULATOR, RF (RFU-2010) (AEP MODEL)  
 1-466-206-11 MODULATOR, RF (RFU-2011) (UK MODEL)  
 △.1-540-054-11 INLET, AC

1-575-387-11 CABLE, FLAT (1.0MM PITCH) 12P  
 1-575-390-11 CABLE, FLAT (1.0MM PITCH) 18P  
 1-575-391-11 CABLE, FLAT (1.0MM PITCH) 5P  
 1-575-456-11 WIRE, FLAT TYPE (20 CORE)  
 M901 X-3731-108-1 MOTOR ASSY

M902 8-835-331-01 MOTOR, DC U-22A  
 M903 A-7040-160-A MOTOR ASSY, THREADING  
 M906 A-7048-339-A DRUM ASSY (DGU-58A-R)

\*\*\*\*\*

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

ACCESSORIES AND PACKING MATERIALS  
\*\*\*\*\*

Part No.	Description	Remark
A-6768-153-A	COMMANDER ASSY (RMT-451)	
1-551-086-31	CORD, CONNECTION	
1-551-513-00	CORD ASSY, COAXIAL	
1-551-734-11	CORD, CONNECTION (RK-74H)	
△.1-558-032-11	CORD, POWER (UK MODEL)	
1-559-533-11	CORD, CONNECTION	
1-574-056-11	CORD, POWER (AEP MODEL)	
1-574-316-11	CORD, CONNECTION	
*1-575-335-21	CORD, CONNECTION	
*3-677-503-00	SHEET, PROTECTION	
*3-742-569-01	INDIVIDUAL CARTON	
*3-742-570-01	CASE, UPPER	
*3-742-571-01	CUSHION (LOWER)	
*3-742-572-02	CUSHION (UPPER)	
3-751-158-41	MANUAL, INSTRUCTION (English)	
3-751-158-51	MANUAL, INSTRUCTION (AEP MODEL) (French, Germans, Spanish)	
3-751-158-61	MANUAL, INSTRUCTION (AEP MODEL) (Dutch, Swedish, Italian)	
8-883-112-29	V8 6CLHSP	

HARDWARE LIST  
\*\*\*\*\*

STOP RING

7-624-105-04 STOP RING 2.3, TYPE -E

PRECISION SCREW

7-627-555-88 PRECISION SCREW +P 1.4X1.8  
7-627-553-37 PRECISION SCREW +P 2X3 TYPE 3  
7-627-553-47 PRECISION SCREW +P 2X4 TYPE 3

SCREW

7-621-772-30 SCREW +B 2X6  
7-685-103-19 SCREW +P 2X5 TYPE2 NON-SLIT  
7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

## SECTION 8 MECHANICAL ADJUSTMENTS

**For mechanical adjustments, refer to the separate "8mm Video Mechanical Adjustments III (U mechanism)"**

### 8-1. Tape pass adjustment

#### (Track shift)

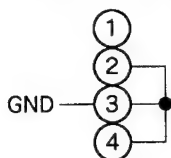
Based on four types of pilot signals, the 8mm video system controls the tape transport speed instantaneously and uses ATF (Automatic Track Finding) to attain high-precision tracking. This makes a tracking adjustment control knob unnecessary. Accurate tracing has also been realized.

However, the ATF system has caused a problem in adjusting the tape pass system. The tape pass cannot be adjusted completely because the ATF automatically compensates even if the head's tracing fluctuates slightly.

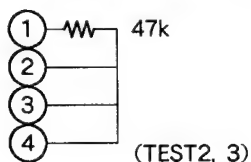
Therefore, to do fine tracking adjustment, first switch to the track shift mode. Since the ATF is forced to operate and the tracking amount (approx.  $\frac{1}{4}$ ) shifts to a constant amount, fine tracking adjustment can be easily done. A track shift jig is unnecessary.

#### 8-1-1. Setting the track shift mode

- 1) ① With the front panel assembly:  
Connect Pins ②, ③, and ④ of CN503.



- ② Without the front panel assembly:  
First connect 47 kΩ resistor to Pin ① of CN503 and to Pins ②, ③ and ④ of CN503.



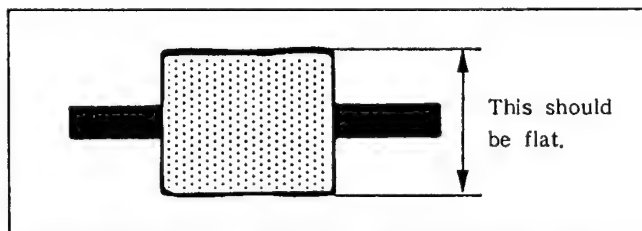
- 2) Switch to the test mode.

**Note:** It is possible to select SP/LP manually in the test mode.

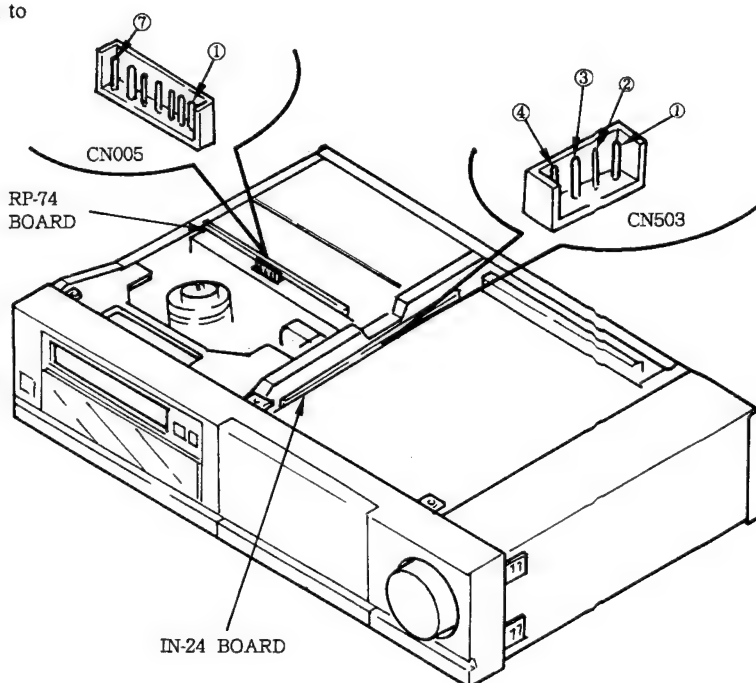
When the set becomes to LP mode, select SP mode by SP/LP switch.

#### 8-1-2. Preparation for adjustment

- 1) Clean the tape transport surfaces (tape guide, drum, capstan, and pinch roller).
- 2) Connection to an oscilloscope and waveform output.  
1ch: The drum head's RF signal output CN005 pin ⑦ (PB RF OUT)  
Output method: Connect the external trigger output CN005 pin ② (RF SW. P) to CN005 pin ① (GND).
- 3) Playback the tracking alignment tape (WR-IN) (J-5).
- 4) Check if the entry and exit sides of the oscilloscope's RF waveform are flat.  
If they are not flat, make the adjustment by following the separately published U mechanical series mechanical adjustment manual.



- 5) After the adjustment is Remove the from the IN -24 board's CN503.



## SECTION 9

### ELECTRICAL ADJUSTMENTS

During adjustment, refer to the relevant parts arrangement diagrams beginning on Page 279.

The following measuring equipment is used for electrical adjustments.

#### [Equipment to be used]

- 1) Monitor TV
- 2) Dual trace oscilloscope having band of over 10 MHz, incorporating delay mode. (Use 10:1 probe unless otherwise specified)
- 3) Frequency counter
- 4) Pattern generator  
(Equipped with video output terminal: refer to 8-1-1. Connection of Equipment)
- 5) Digital voltmeter
- 6) Audio generator
- 7) Audio level meter
- 8) Audio distortion meter
- 9) Audio attenuator
- 10) Audio multiplex signal generator
- 11) Alignment tapes
- 12) Vectorscope

Tracking adjustment (WR5-1CP)      Parts Code: 8-967-995-07

Video frequency response adjustment (WS5-7CE)

Parts Code: 8-967-995-18

Normal mode operation checking

For SP (WR5-5CSP)      Parts Code: 8-967-995-46

or (WR5-4CSP)      Parts Code: 8-967-995-47

For LP (WR5-4CL)      Parts Code: 8-967-995-56

Hi8 mode operation checking (ME Tape)

For SP (WR5-8NCE)      Parts Code: 8-967-995-48

For LP (WR5-8NCE)      Parts Code: 8-967-995-57

AFM Stereo operation checking

For SP (WRS-9CS)      Parts Code: 8-967-995-28

## 9-1. PREPARATIONS

### 9-1-1. Connection of Equipment

Adjustment is performed by connection of the measuring equipment shown in Fig. 8-1., according to the input terminal indications (S VIDEO or VIDEO). The input terminal is indicated by ( ) in the signal column. Either input terminal can be used when there is no indication. The S VIDEO IN terminal has priority. When adjusting using the VIDEO IN terminal input, remove the connector from the S VIDEO IN terminal.

- Notes:**
- 1) If adjustment is performed by VIDEO input when S VIDEO input is indicated, the product specifications for this unit may not be satisfied. Be sure to follow the indications.
  - 2) When performing adjustment using a VCR equipped with an S video output terminal as the signal source, the performance of this unit may be affected by that VCR. Try to use a pattern generator with a Y/C separation output terminal if possible.

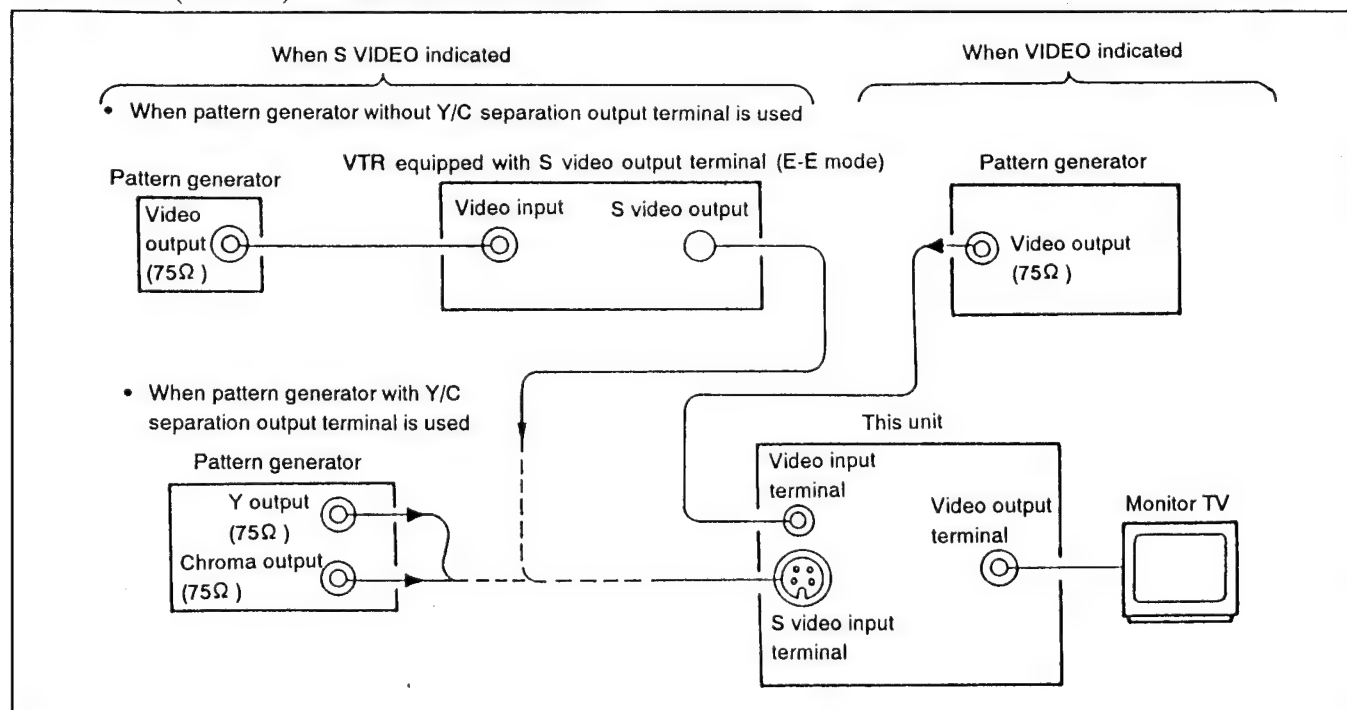


Fig. 9-1.



### 9-1-2. Confirmation of Input Signal

As adjustment is made using a video signal obtained from a pattern generator as the adjustment signal, it is necessary to confirm that the video output signal is within the required specifications.

#### 1. S VIDEO Input

Connect an oscilloscope to the Y signal terminal of the S video input terminal (CNJ505 on RJ-5 board) and confirm that the sync signal of the Y signal is approximately 0.3 Vp-p and the amplitude of the video section is approximately 0.7 Vp-p. (When using a VCR equipped with an S video output terminal, confirm that there is no residual chroma signal or burst signal.) Next, connect the oscilloscope to the chroma signal terminal of the S video input terminals and confirm that the burst signal amplitude of the chroma signal is approximately 0.3 Vp-p and flat, and that the amplitude ratio of the burst signal to the chroma signal is 0.30:0.66. The Y and chroma signals used for adjustment are shown in Fig. 9-2.

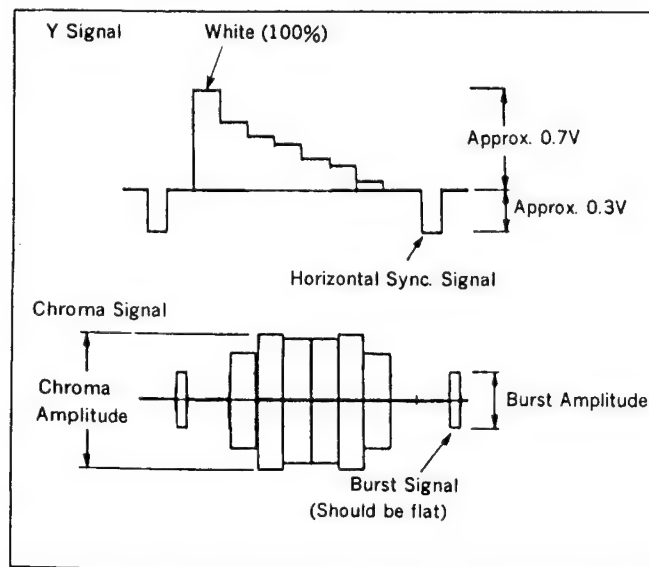


Fig. 9-2. Pattern Generator Color Bar Signals

#### 2. VIDEO Input

Connect an oscilloscope to the video input terminal (CNJ505 on RJ-5 board) and confirm that the amplitude of the sync signal of the video signal is approximately 0.3V and the amplitude of the video section is approximately 0.7V. Confirm that the burst signal amplitude is approximately 0.3V and flat, and that the level ratio of the burst signal and red signal is 0.30:0.66. The video signal (color bars) used for adjustment are shown in Fig. 9-3.

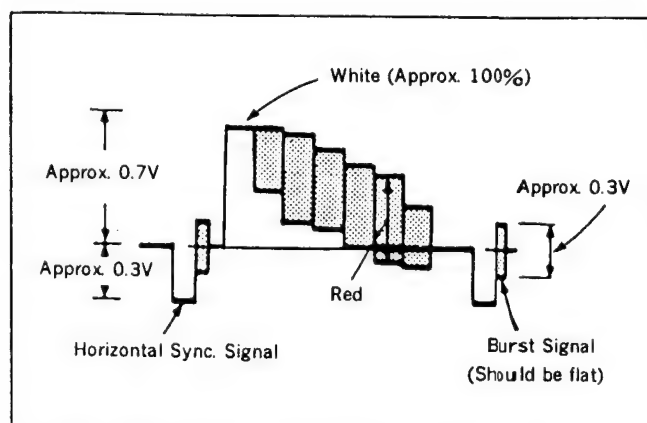


Fig. 9-3. Pattern Generator Color Bar Signal

### [Alignment tapes]

The alignment tapes shown in the table below are available. Use the tape indicated in the signal column of each adjustment section.

When a specific name is not given for use of an operation checking tape, any of the operation checking tapes can be used.

Name	Recording Mode	Tape Type	Tape Speed	Contents		Use
				Video Area	PCM Area	
Tracking WR5-1CP	STD	MP	SP	CH2: Signal for 1 MHz tape path adjustment Marker (CH1: 9 MHz) for switching position adjustment		Tape path adjustment Switching position adjustment
Video frequency response WR5-7CE	Hi8	ME	SP	RF sweep 0 to 15 MHz Markers 2, 4.5, 7, 8.5, 10 MHz		Frequency response adjustment
Operation checking WR5-4CSP or WR5-5CSP	STD	MP	SP	<ul style="list-style-type: none"> <li>Video signals Color bars 4 minutes Monoscope 4 minutes</li> <li>Audio signal (AFM) 400 Hz, 60% modulation</li> </ul>	<ul style="list-style-type: none"> <li>Audio signals (PCM) Monoscope section 20 Hz 20 seconds 400 Hz 20 seconds 14 kHz 20 seconds Color bar section 1 kHz 4 minutes</li> </ul>	Operation checking
WR5-8CSE	Hi8	ME	SP		Audio signals (PCM) 400 Hz 8 minutes	
WR5-4CL	STD	MP	LP	<ul style="list-style-type: none"> <li>Video signals Color bars 4 minutes Monoscope 4 minutes</li> </ul>		
WR5-8CLE	Hi8	ME	LP	<ul style="list-style-type: none"> <li>Audio signal (AFM) 400 Hz, 60% modulation</li> </ul>	Audio signals (PCM) 400 Hz 8 minutes	
WR5-9CS	STD	MP	SP	<ul style="list-style-type: none"> <li>Video signals Color bars 4 minutes Monoscope 4 minutes</li> <li>Audio signal (AFM) Lch: 400Hz L+R (1.5 MHz <math>\pm</math> 60 kHz) Rch: 1 kHz L-R (1.7 MHz <math>\pm</math> 30 kHz)</li> </ul>	Audio signals (PCM) 400 Hz 8 minutes	

**Note:** Recording modes

STD ..... Conventional mode

Hi8 ..... High band mode

Tape Types

MP ..... Metal particle tape

ME ..... Metal evaporated tape

The 100% color bar signal recorded on the alignment tape is shown in Fig. 9-4.

**Note:** Measured at VIDEO OUT terminal (terminated at 75 $\Omega$ )

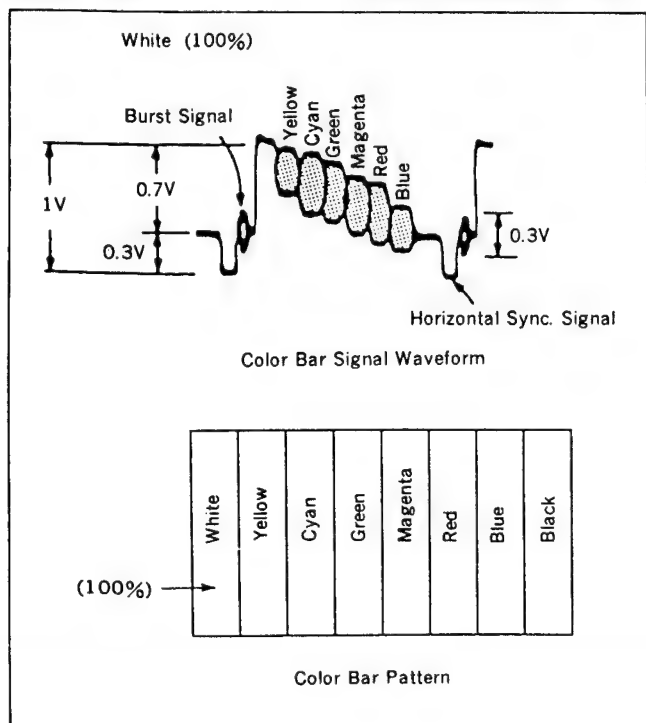


Fig. 9-4. Color bar signal on alignment tape

### [I/O level and Impedance]

Video input Pin jack

Input signal: 1 Vp-p, 75 $\Omega$  unbalanced,  
negative SYNC

Video output Pin jack

Output signal: 1 Vp-p, 75 $\Omega$  unbalanced,  
negative SYNC

S video input (4-pin mini DIN)

Luminance signal: 1 Vp-p, 75 $\Omega$  unbalanced,  
negative SYNC

Color signal: 0.3 Vp-p, 75  $\Omega$  , unbalanced

S video output (4-pin mini DIN)

Luminance signal: 1 Vp-p, 75 $\Omega$  unbalanced,  
negative SYNC

Color signal: 0.3 Vp-p, 75  $\Omega$  , unbalanced

Audio input Pin jack

Input level: -7.5 dBs (0 dBs=0.775 Vrms)

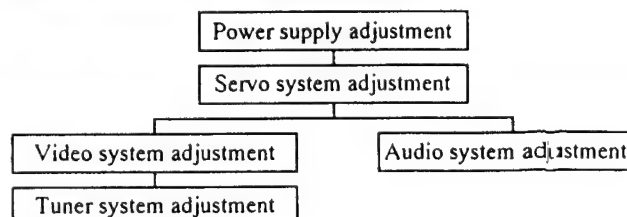
Audio output Pin jack

Rated output: -7.5 dBs (with 47 k $\Omega$  load)

Output impedance: Less than 1 k $\Omega$

### [Adjustment order]

Perform adjustment in the following order.



## 9-2. POWER SUPPLY BLOCK ADJUSTMENT

### 9-2-1. Voltage Check (PS-196 Boards)

Mode	E-E
Measuring Instrument	Digital multimeter
UNSW 5.6 V Check	
Measurement Point	Pin ⑥ of CN001
Specified Value	$5.6 \pm 0.2 \text{ V}$
UNSW - 5 V Check	
Measurement Point	Pin ⑨ of CN001
Specified Value	$-5 \pm 0.2 \text{ V}$
UNSW 9 V Check	
Measurement Point	Pin ④ of CN001
Specified Value	$9 \pm 0.5 \text{ V}$
UNSW 40 V Check	
Measurement Point	Pin ① of CN001
Specified Value	$40 \pm 2 \text{ V}$
UNSW - 30 V Check	
Measurement Point	Pin ④ of CN002
Specified Value	$-30 \pm 3 \text{ V}$
UNSW 5.7 V Check	
Measurement Point	Pin ② of CN002
Specified Value	$5.7 \pm 0.6 \text{ V}$
SW 5 V Check	
Measurement Point	Pin ⑧ of CN001
Specified Value	$5 \pm 0.2 \text{ V}$
SW - 5 V Check	
Measurement Point	Pin ⑩ of CN001
Specified Value	$-5 \pm 0.3 \text{ V}$
SW 9 V Check	
Measurement Point	Pin ③ of CN001
Specified Value	$9 \pm 0.2 \text{ V}$
SW 12 V Check	
Measurement Point	Pin ② of CN001
Specified Value	$12 \pm 0.5 \text{ V}$

Checking method:

- 1) Confirm that each voltage is at the specified level.

PS-196 BOARD ( COMPONENT SIDE )

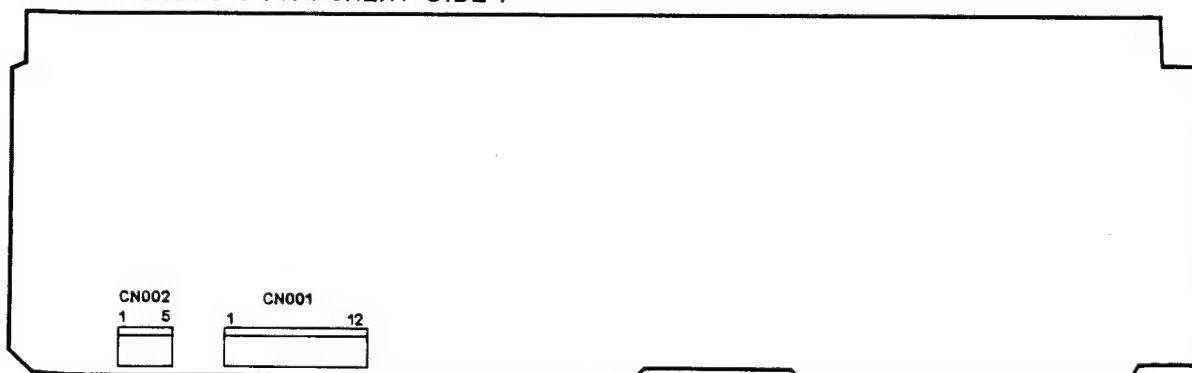


Fig. 9-5.

### 9-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

#### 9-3-1. Timer Clock Adjustment (FL-24 Board)

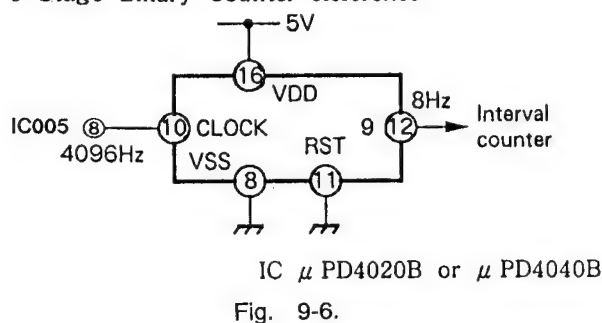
Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ⑧ of IC005
Measuring Instrument	Interval counter
Adjustment Element	CT001
Specified Value	$0.125 \pm 0.0000005$ sec

##### [Adjustment Method]

- 1) Pass a 9-state binary counter through pin ⑧ of IC005, to divide the 4096Hz frequency nine times and transform to 8Hz. Measure the cycle.
- 2) Adjust CT001 so that an 8Hz cycle equals  $0.125 \pm 0.0000005$  seconds.

**Note :** Do not adjust CT001 except when replacing microcomputers.

##### 9 Stage Binary Counter Reference



### 9-4. SERVO SYSTEM ADJUSTMENT

#### 9-4-1. PWM Oscillation Frequency (CM-15 Board)

Mode	REC
Signal	Arbitrary
Measurement Point	Pin ⑦ of IC502
Measuring Instrument	Frequency counter
Adjustment Element	RV501
Specified Value	$476.56 \pm 5$ kHz

##### Adjustment Method:

- 1) Adjust to  $476.56 \pm 5$  kHz with RV501.

#### 9-4-2. Switching position Adjustment (CM-15 Board)

Mode	Playback
Signal	Alignment tape: tracking adjustment (WR5-1CP)
Measurement Point	CH1: Pin ③ (RF CH2) of CN005 on RP-74 board CH2: Pin ② (RF SW PLS) of CN005 on RP-74 board
Measuring Instrument	Oscilloscope
Adjustment Element	RV401
Specified Value	$0 \pm 5 \mu s$

##### Connection:

- 1) TEST 1 mode (Pin ③ and Pin ④ with a jumper wire of CN503 on IN-24 board).

##### Adjustment method:

- 1) Adjust with RV401 so that the marker of the RF CH 2 waveform is lined up with the falling edge of the RF SWP waveform.

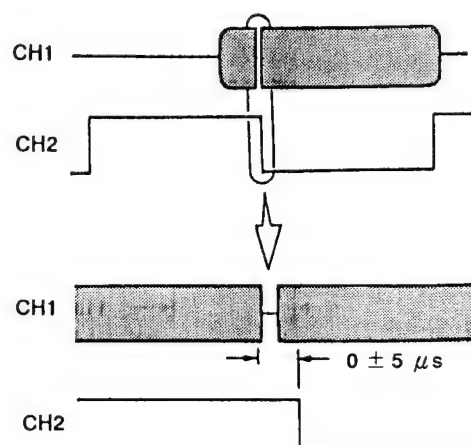


Fig. 9-7. Switching position adjustment

## 9-5. VIDEO ADJUSTMENT

As a rule, adjustment of the video system is made in the following order.

The color video signal supplied from the pattern generator is used as the video input signal for adjustment of the video system in the recording mode. Confirm that the sync signal and color burst signal satisfy the specifications designated in the adjustment setup shown in Fig. 8-3.

### [Adjustment Method]

- 1) Playback Frequency Characteristics Adjustment
- 2) Flying Erase Check
- 3) FSC  $f_0$  Adjustment
- 4) ORC SP (LP) Adjustment
- 5) Y/C Separation Comb-type Filter Adjustment
- 6) Y Comb-type Filter Adjustment
- 7) SYNC AGC Adjustment
- 8) PB Emphasis out Level Adjustment
- 9) Deemphasis Adjustment
- 10) STD Mode PB Y Level Adjustment
- 11) Hi8 Mode PB Y Level Adjustment
- 12) STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
- 13) Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
- 14) 378  $f_H$  VCO Adjustment
- 15) Chroma Emphasis  $f_0$  Adjustment
- 16) Carrier Balance Adjustment
- 17)  $f_0$  VCO Adjustment
- 18) GCA Gain Adjustment
- 19) REC Y Level Adjustment
- 20) REC C Level Adjustment
- 21) D. O. C. Level Adjustment

## 9-5-1. Playback Frequency Characteristics Adjustment (RP-74 Board)

### 1. SP Playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [ ].

Mode	Playback
Signal	Alignment tape: Frequency characteristics adjustment (WR5-7CE)
Measurement Point	Pin ④ of CN005 [Pin ③ of CN005] External trigger: Pin ② (RF SWP) of CN005 Trigger slope: - [+]
Measuring Instrument	Oscilloscope
Adjustment Element	RV202 [RV201]
Specified Value	8.5 MHz level is 66% of 4.5 MHz level

Connection:

- 1) TEST 2 mode (Pin ② and Pin ③ with a jumper wire of CN503 on IN-24 board).

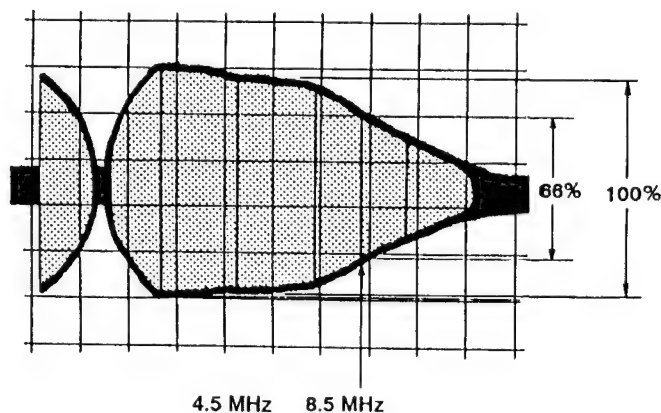


Fig. 9-8.

### 2. LP playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [ ].

Mode	Playback
Signal	Alignment tape: Frequency characteristics adjustment (WR5-7CE)
Measurement Point	Pin ⑥ of CN005 [Pin ⑤ of CN005] External trigger: Pin ② (RF SWP) of CN005 Trigger slope: - [+]
Measuring Instrument	Oscilloscope
Adjustment Element	RV102 [RV101]
Specified Value	8.5 MHz level is 66% of 4.5 MHz level

Connection:

- 1) TEST 2 mode.



### 9-5-2. Flying Erase Check (RP-74 Board)

Mode	REC
Signal	Arbitrary
Measurement Point	Pin ② of CN001
Frequency Check	
Measuring Instrument	Frequency counter
Measuring	$7.6 \pm 0.5$ MHz
Output Level Check	
Instrument	Oscilloscope
Specified Value	Approx. 8 Vp-p

- Notes:** 1) Use MP-type tape.  
2) Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least  $1\text{ M}\Omega$ ) and low capacitance (less than  $10\text{ pF}$ ).

Adjustment method:

- 1) Confirm the frequency and output level are  $7.6 \pm 0.5$  MHz and approximately 8.0 Vp-p respectively.



( $7.6 \pm 0.5$  MHz)

Fig. 9-9.

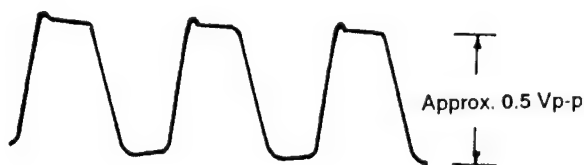
### 9-5-3. FSC f<sub>0</sub> Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: operation checking (WR5-4CSP or WR5-5CSP)
Measurement Point	Pin ⑭ of IC801
Measuring Instrument	Frequency counter
Adjustment Element	CV800
Specified Value	$4433619 \pm 50$ Hz

**Note:** Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least  $1\text{ M}\Omega$ ) and low capacitance (less than  $10\text{ pF}$ ).

Adjustment method:

- 1) Adjust to  $4433619 \pm 50$  Hz using CV800.



( $4433619 \pm 50$  Hz)

Fig. 9-10.

### 9-5-4. (a) ORC SP Mode adjustment (VI-65 Board)

The adjusting element for CH2 mode is shown within [ ].

Mode	REC Pause (MP type Tape)
Signal	WHITE Signal 50%
Measurement Point	Pin ④ of CN005 [Pin ③ of CN005] on RP-74 Board
Measuring Instrument	Oscilloscope
Adjustment Element	RV304 [RV303]
Specified Value	Maximize Envelope

Connection:

- 1) TEST 2 mode.

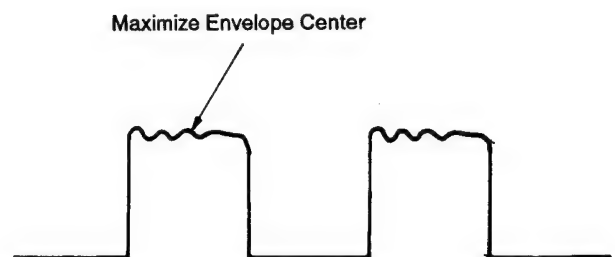


Fig. 9-11.

### 9-5-4. (b) ORC LP Mode adjustment (VI-65 Board)

The adjusting element for CH2 mode is shown within [ ].

Mode	REC Pause (MP type Tape)
Signal	WHITE Signal 50%
Measurement Point	Pin ⑥ of CN005 [Pin ⑤ of CN005] on RP-74 Board
Measuring Instrument	Oscilloscope
Adjustment Element	RV305 [RV302]
Specified Value	Maximize Envelope

Connection:

- 1) TEST 2 mode.

### 9-5-5. Y/C Separation Comb-type Filter Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars (Pin ③④ of IC400) 1 Vp-p
Measurement Point	Pin ②⑨ of IC400
Measuring Instrument	Oscilloscope
Adjustment Element	LV400 and RV400
Specified Value	Minimum chroma component (less than 50 m Vp-p)

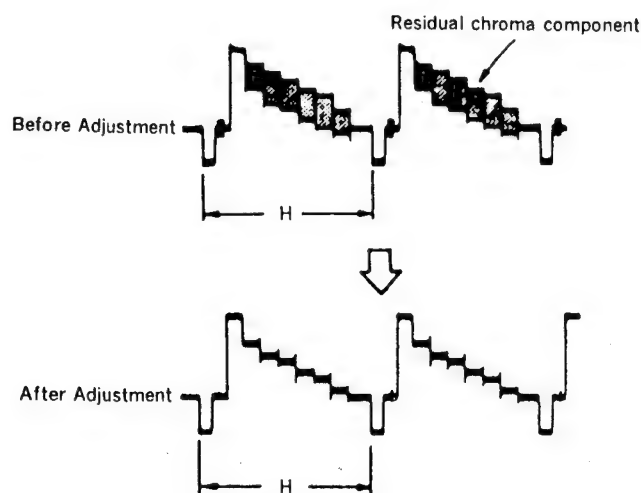


Fig. 9-12.

### 9-5-6. Y Comb-type Filter Adjustment (VI-65 Board)

Mode	E-E (LP mode)
Signal	Color bars
Measurement Point	Pin ⑫ of IC400
Measuring Instrument	Oscilloscope (1: 1 probe used)
Adjustment Element	RV401
Specified Value	Set amplitude to minimum

**Note:** Be sure to perform adjustment in LP mode.

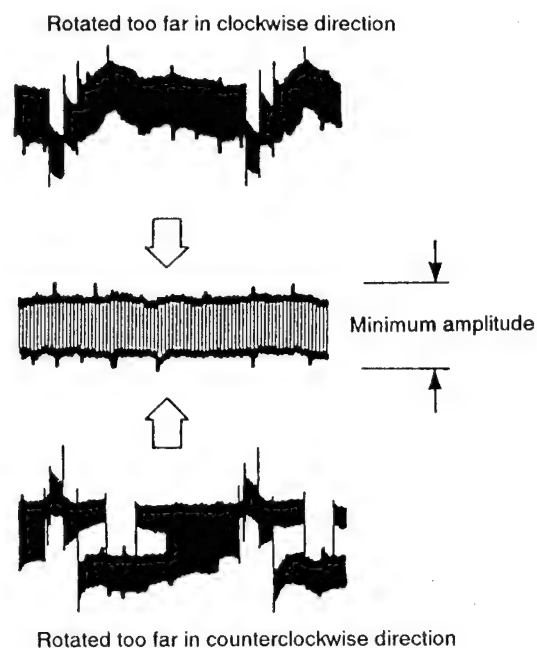


Fig. 9-13.

### 9-5-7. SYNC AGC Adjustment (VI-65 Board)

Mode	E-E
Signal	Color bars
Measurement Point	C205 ④
Measuring Instrument	Oscilloscope
Adjustment Element	RV105
Specified Value	$0.50 \pm 0.025$ Vp-p

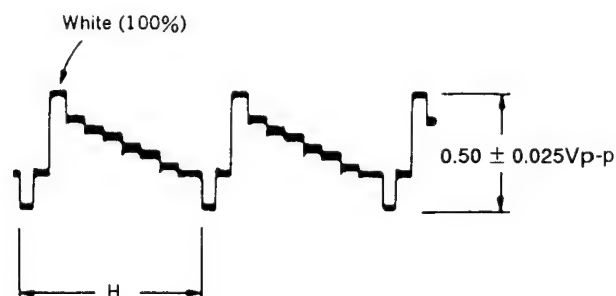


Fig. 9-14.

9-5-8. PB Emphasis out Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-5CSP or WR5-4CSP) Color bar section
Measurement Point	Q123Ⓢ
Measuring Instrument	Oscilloscope
Adjustment Element	RV102
Specified Value	$0.50 \pm 0.02 \text{ V}_{p-p}$

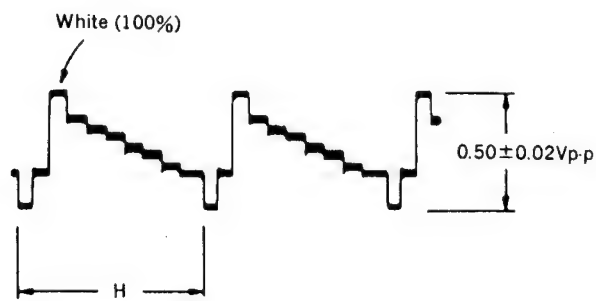


Fig. 9-15.

9-5-10. STD Mode PB Y Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-4NSP or WR5-4NSP) Color bar section
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV104
Specified Value	$1.00 \pm 0.05 \text{ V}_{p-p}$

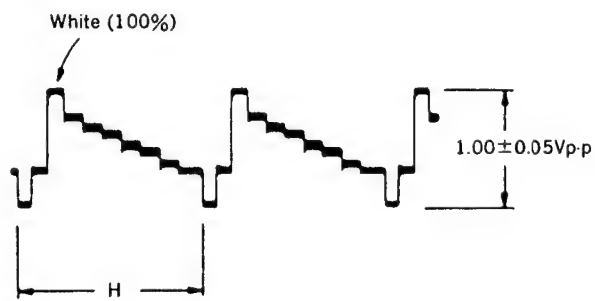


Fig. 9-17.

9-5-9. Deemphasis Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-4CSP or WR5-4CSP) Color bar section
Measurement Point	Q123Ⓢ
Measuring Instrument	Oscilloscope
Adjustment Element	RV103
Specified Value	100% white level is flat

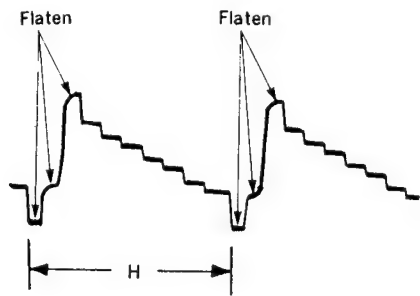


Fig. 9-16.

### 9-5-11. Hi8 Mode PB Y Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-8NSE) Color bar section
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV101
Specified Value	$1.00 \pm 0.05 \text{ Vp-p}$

**Note:** 1) Set the picture quality adjustment knob to the center click position.  
2) Be sure to perform "9-5-10. STD Mode PB Y Level Adjustment" before this adjustment.

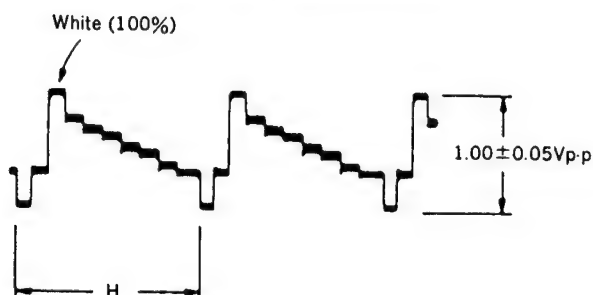


Fig. 9-18.

### 9-5-12. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

**Note:** After adjustment, perform "9-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".

#### 1. STD mode Y FM carrier frequency adjustment (VI-65 board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ④ (REC RF) of CN003
Measuring Instrument	Frequency counter
Adjustment Element	RV203
Specified Value	$4.38 \pm 0.03 \text{ MHz}$

Adjustment method:

- 1) Insert an MP-type cassette tape.
- 2) Adjust to  $4.38 \pm 0.03 \text{ MHz}$  using RV203.
- 3) Perform "2. STD Mode Y FM Deviation Adjustment".



Fig. 9-19.

#### 2. STD mode Y FM deviation adjustment (VI-57 board)

Mode	REC and playback
Signal	Color bars
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV205
Specified Value	Playback level is $1.00 \pm 0.05 \text{ Vp-p}$

**Note:** Perform this adjustment after confirming that "9-5-10. STD Mode PB Y Level Adjustment", and "9-5-12. 1. STD Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:

- 1) Insert an MP type cassette tape.
- 2) Record the color bar signal.
- 3) Playback the recorded signal.
- 4) Check the playback output level.  
Specified value:  $1.00 \pm 0.05 \text{ Vp-p}$
- 5) If the specified value is not satisfied, rotate RV205 as described below and repeat steps 1) through 3).

	Rotational direction for RV205
Smaller than specified value	Counterclockwise direction (↺)
Larger than specified value	Clockwise direction (↻)



Fig. 9-20.

### 9-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

- Notes:**
- 1) Perform this adjustment after "9-5-11. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".
  - 2) Before adjustment, confirm that the Hi8 switch (S003 on FL-24 board) is set to the AUTO position, and that the connector is attached to the S video terminal (CNJ505 on RJ-5 board) of the line input (even when there is no signal).

#### 1. Hi8 mode Y FM carrier frequency adjustment (VI-65 board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ④ of CN003
Measuring Instrument	Frequency counter
Adjustment Element	RV204
Specified Value	$5.98 \pm 0.03$ MHz

Adjustment method:

- 1) Insert an ME-type cassette tape.
- 2) Adjust to  $5.98 \pm 0.03$  MHz using RV204.
- 3) Perform "2. Hi8 Mode Y FM Deviation Adjustment".



$5.98 \pm 0.03$  MHz

Fig. 9-21.

#### 2. Hi8 mode Y FM deviation adjustment (VI-65 board)

Mode	REC and playback
Signal	Color bars
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV202
Specified Value	Playback level is $1.00 \pm 0.05$ Vp-p

**Note:** Perform this adjustment after confirming that "9-5-11. PB Y Level Adjustment", and "9-5-13. 1. Hi8 Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:

- 1) Insert an ME-type cassette tape.
- 2) Record the color bar signal.
- 3) Playback the recorded signal.
- 4) Check the playback output level.  
Specified value:  $1.00 \pm 0.05$  Vp-p
- 5) If the specified value is not satisfied, rotate RV202 as described below and repeat steps 1) through 3).

	Rotational direction for RV202
Larger than specified value	Counterclockwise direction (○)
Smaller than specified value	Clockwise direction (○)

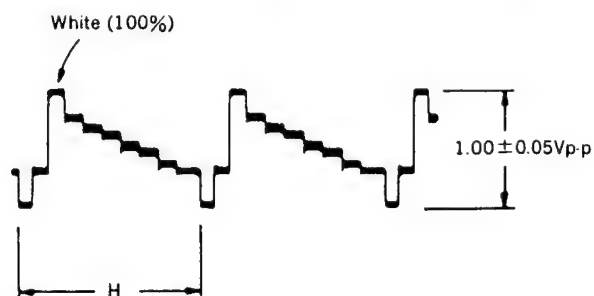


Fig. 9-22.



#### 9-5-14. 378f<sub>H</sub> VCO Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars
Measurement Point	Pin ②⑥ of IC801
Measuring Instrument	Digital voltmeter
Adjustment Element	RV801
Specified Value	3.00 ± 0.05 Vdc

Adjustment method:

- 1) Adjust to 3.00 ± 0.05 Vdc using RV801

#### 9-5-15. Chroma Emphasis f<sub>0</sub> Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars
Measurement Point	Pin ④④ of IC801
Measuring Instrument	Oscilloscope
Adjustment Element	FL801
Specified Value	Minimum chroma component

Preparations:

- 1) Connect the following two locations using 10 kΩ resistors.
  - Pin ⑦ of IC801 – Pin ④③ of IC 801 (GND)
  - Pin ⑦ of IC801 – Pin ②⑨ of IC 801 (SW 5 V)

Adjustment method:

- 1) Adjust FL802 for minimum chroma component.
- 2) Remove the 10 kΩ resistors after adjustment.

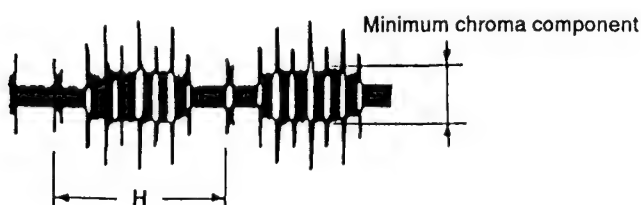


Fig. 9-23.

#### 9-5-16. Carrier Balance Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars
Measurement Point	Pin ③⑧ of IC801
Measuring Instrument	Oscilloscope
Adjustment Element	RV800
Specified Value	Minimum 5.17 MHz component

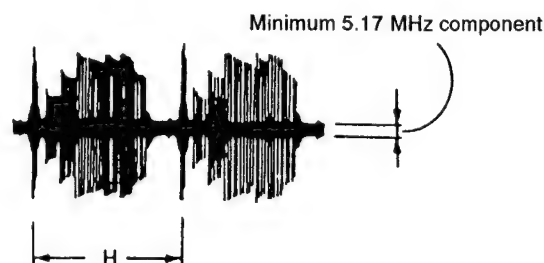


Fig. 9-24.

#### 9-5-17. f<sub>0</sub> VCO Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars (VIDEO)
Measurement Point	Pin ①⑤ of IC700
Measuring Instrument	Frequency counter
Adjustment Element	RV701
Specified Value	15,625 ± 50 Hz

Connection:

- 1) Connect the IC700 pins ①② and ⑥ (GND) with a jumper wire.

Adjustment method:

- 1) Adjust to 15,625 ± 50 Hz with RV701.



15,625 ± 50 Hz

Fig. 9-25.

#### 9-5-18. GCA Gain Adjustment (VI-65 Board)

Mode	Playback and STILL, CUE, REVIEW
Signal	Alignment tape for operation checking (WR5-5CSP or WR5-3CSP) Color bar portion
Measurement point	IC700 pin ⑤
Measuring instrument	Oscilloscope
Adjustment element	RV700
Specified value	$b = (a - 20) \pm 15 \text{ mVp-p}$

##### [Adjustment Method]

- 1) Playback, and measure the burst level. (this level is ㉑)
- 2) Set to the STILL, CUE and REVIEW mode, and measure the burst level once more. (this level is ㉒)
- 3) With RV701 adjust the burst level of the STILL, CUE and REVIEW mode to  $㉒ = (㉑ - 20) \pm 15 \text{ mVp-p}$ .

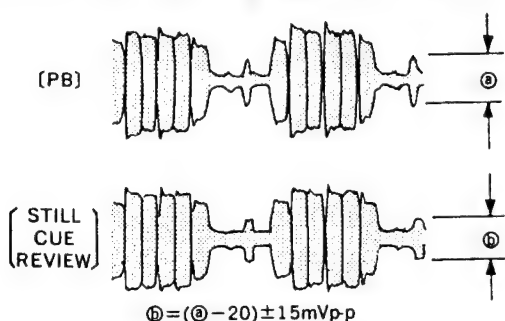


Fig. 9-26.

#### 9-5-19. REC Y Level Adjustment (VI-65 Board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ④ of CN003
Measuring Instrument	Oscilloscope
Adjustment Element	RV300
Specified Value	$0.60 \pm 0.02 \text{ Vp-p}$

**Note:** 1) Use MP-type tape.

##### Adjustment method:

- 1) Adjust to  $0.60 \pm 0.02 \text{ Vp-p}$  using RV300.

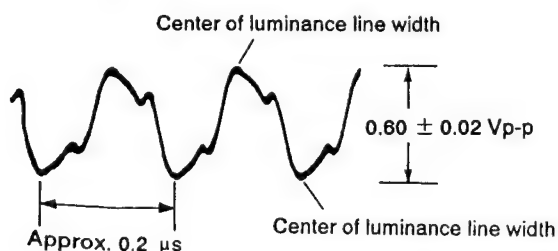


Fig. 9-27.

#### 9-5-20. REC C Level Adjustment (VI-65 Board)

Mode	E-E (Tape: MP) Hi8 mode
Signal	Colour bars
Measurement Point	Collector of Q328
Measuring Instrument	Oscilloscope
Adjustment Element	RV301
Specified Value	$0.20 \pm 0.01 \text{ Vp-p}$

**Note:** 1) Use MP-type tape.

##### Preparations:

- 1) Use jumper wires to make the following three connections.
  - Pin ⑥ of CN001(REC AFM) – GND
  - Pin ⑧ of CN001(REC ATF) – GND

##### Adjustment method:

- 1) Adjust to  $0.20 \pm 0.01 \text{ Vp-p}$  using RV301.

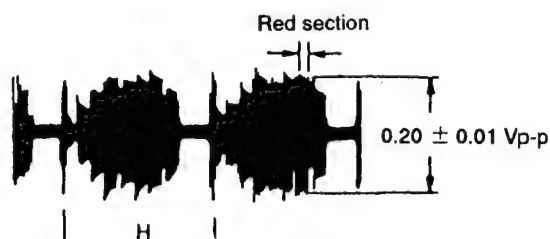


Fig. 9-28.

#### 9-5-21. D. O. C. Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Self-recording and playback of Hi8 in MPHG tape, and colour bars in LP mode.
Measurement Point	Pin ③ of Q608
Measuring Instrument	Digital voltmeter
Adjustment Element	RV601
Specified Value	$1.76 \pm 0.01 \text{ V}$

## 9-6. SECAM-PAL CONVERSION SYSTEM ADJUSTMENT (AEP model only)

- Make this adjustment aligning the PAL video system.
- For this adjustment, use the equipment listed below.

### [Equipment Required]

- (1) PAL Colour Monitor TV
- (2) Oscilloscope, Dual-trace, Bandwidth...more than 10MHz with delay mode
- (3) SECAM colour-bar generator
- (4) PAL vector scope
- (5) Frequency counter
- (6) Digital voltmeter

### Setting up during adjustment

Video signals output by a pattern generator are used as adjustment signals when making the electrical adjustments, and these video output signals should be within the required standard. Connect an oscilloscope to CNJ501 (VIDEO IN) on the RJ-5 Board. Check that the amplitudes of video signal SYNC signals, picture portions, and line ID signals are flat at approximately 0.3, 0.7, and 0.3V, respectively. Fig. 9-29. shows video signals (colour bars) used in making the electrical adjustment.

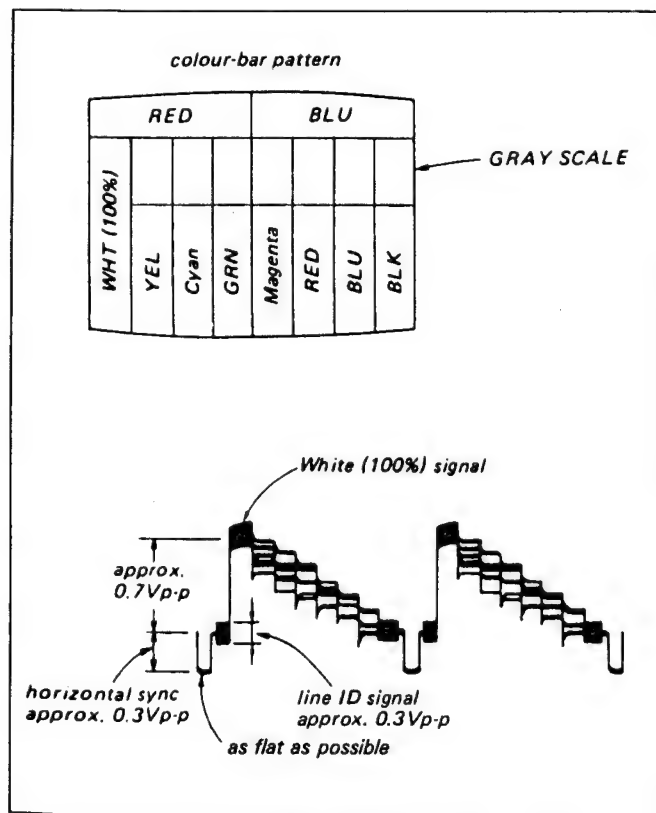


Fig. 9-29.

### 9-6-1. $f_H$ VCO Adjustment (YC-64 Board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ⑨ of IC201
Measuring Instrument	Frequency counter
Adjustment Element	RV201
Specified Value	$15,625 \pm 0.01$ kHz

### [Connection]

Connect between pin ⑮ of IC201 and pin ⑰ of IC201 with a jumper wire.

### [Adjustment method]

- 1) Adjust with RV201 so that it becomes  $15.625 \pm 0.01$  kHz.



Fig. 9-30.

### 9-6-2. I REF Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ⑨ of IC201 Pin ① of CN001
Measuring Instrument	Oscilloscope
Adjustment Element	RV202
Specified Value	$tr = 4.5 \pm 0.1$ $\mu$ s

### [Adjustment method]

- 1) IC201 (⑮-⑰ OPEN)

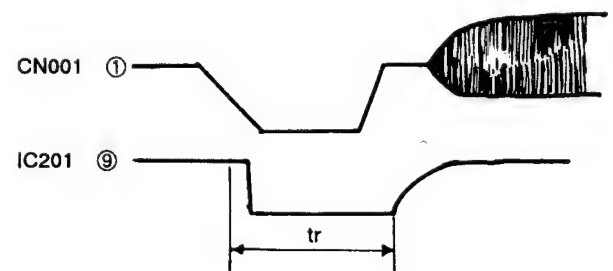


Fig. 9-31.

### 9-6-3. Bell Filter Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ⑳ of IC201
Measuring Instrument	Oscilloscope
Adjustment Element	LV201
Specified Value	The level variation of the chroma signal amplitude is $0 \pm 10\%$

**Note:** When performing (Adjustment method 1) be sure to use 1:1 probe as the signal level of IC201 pin ⑳ is extremely small. In addition, when the adjustment is impossible because of the signal level is too small to read, perform (Adjustment method 2).

#### [Adjustment method 1]

- 1) Adjust LV201 until the waveform is flat.

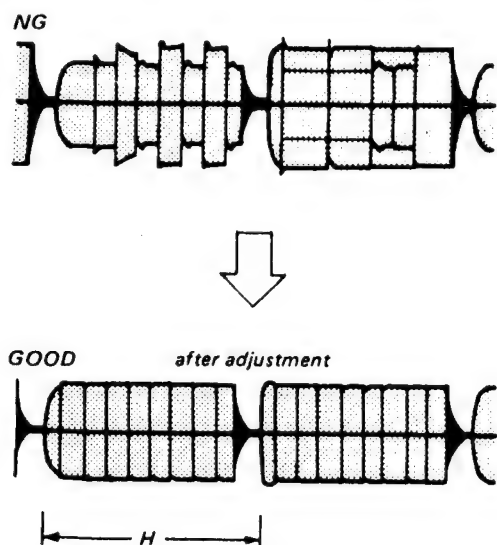


Fig. 9-32.

#### [Adjustment method 2]

- 1) Set the picture level of the monitor TV to maximum.
- 2) Adjust by turning LV201 so that the borders of the respective colour-bars (especially red and blue) become vivid and stop LV201 at the position where the beat (red and magenta sections) becomes small.

### 9-6-4. Colour Level Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ③ of IC202
Measuring Instrument	Oscilloscope
Adjustment Element	RV203
Specified Value	$0.75 \pm 0.05 \text{ Vp-p}$

**Note:** IC201 (①⑨-②① SHORT)

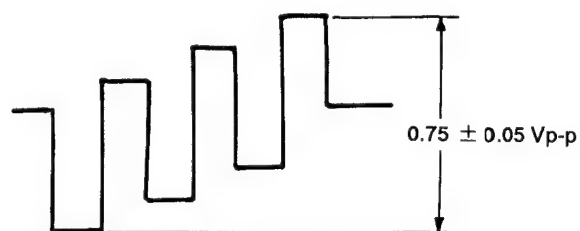


Fig. 9-33.

### 9-6-5. R-Y to Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ② of IC202
Measuring Instrument	Oscilloscope
Adjustment Element	LV202
Specified Value	Less than 0.05 V

#### [Adjustment method]

- 1) IC201 (①⑨-②① SHORT)

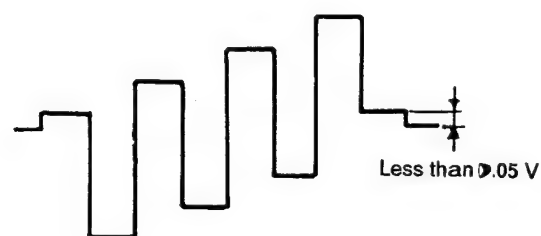


Fig. 9-34.

### 9-6-6. B-Y $f_0$ Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ③ of IC202
Measuring Instrument	Oscilloscope
Adjustment Element	LV203
Specified Value	Less than 0.05 V

#### [Adjustment method]

- 1) IC201 (⑩-⑪) SHORT

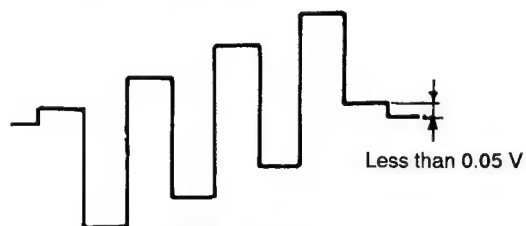


Fig. 9-35.

## 9-7. DIGITAL ADJUSTMENTS

### [Adjustment Sequence]

- 9-7-1. Decoder-oscillated Free Run Frequency Adjustment
- 9-7-2. Encoder-oscillated Free Run Frequency Adjustment
- 9-7-3. TINT Adjustment
- 9-7-4. V OUT SUB Color Level Adjustment
- 9-7-5. V OUT SUB C Hue Adjustment
- 9-7-6. Write Clock Adjustment
- 9-7-7. S OUT SUB C Hue Adjustment
- 9-7-8. SUB Y Level Adjustment
- 9-7-9. Color Level Adjustment
- 9-7-10. CG OSC Adjustment

### 9-7-1. Decoder-oscillated Free Run Frequency Adjustment (DS-35 Board)

Mode	E-E
Signal	Monoscope
Measurement Point	IC209 pin ⑩
Measuring Instrument	Frequency counter
Adjustment Element	CV202
Specified Value	4,433,619 $\pm$ 25Hz

#### [Connection]

- 1) Connect IC209(R121 side) and GND with a jumper wire.

**Note :** Connect the frequency counter through a buffer amplifier(oscilloscope, etc).of high input impedance (10M  $\Omega$  or more) and low capacity (10pF or less).

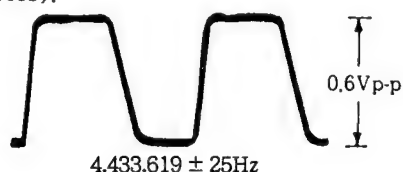


Fig. 9-36.

### 9-7-2. Encoder-oscillated Free Run Frequency Adjustment (DS-35 Board)

Mode	E-E
Signal	Alignment tape SP monoscope
Measurement Point	IC213 pin ⑩
Measuring Instrument	Frequency counter
Adjustment Element	CV203
Specified Value	17,734,473 $\pm$ 100Hz

#### [Connection]

- 1) Connect IC213 pin ⑩ and VCC with a jumper wire.

**Note :** Connect the frequency counter through a buffer amplifier (oscilloscope, etc).of high input impedance (10M  $\Omega$  or more) and low capacity (10pF or less).

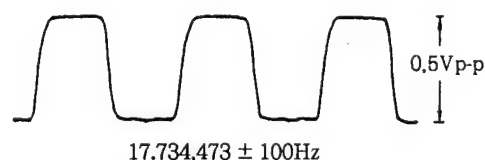


Fig. 9-37.

### 9-7-3. (a) TINT Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	Q501 ⑥
Measurement equipment	Oscilloscope
Adjustment element	RV202
Specified value	A=B



Fig. 9-38.



### 9-7-3. (b) TINT Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	RJ-6 board (EURO-AV)
Measurement equipment	Vectorscope
Adjustment element	RV202
Specified value	Adjust the vector phase of the small image so that the double waveforms become one clear waveform.

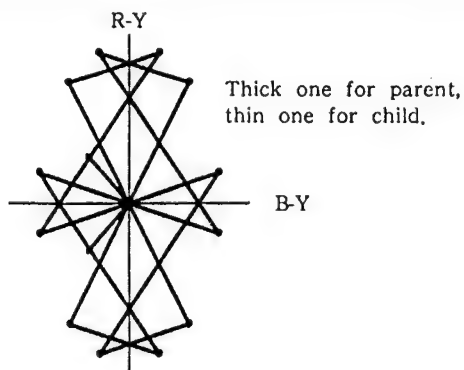


Fig. 9-39.

### 9-7-4. (a) V OUT SUB Colour Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	100 % Chroma
Measurement Point	Pin ⑥ of CN202
Measuring Instrument	Oscilloscope
Adjustment Element	RV201
Specified Value	$700 \pm 50\text{mVp-p}$

#### [Adjustment Method]

- 1) Adjust to  $700 \pm 50\text{mVp-p}$  Using RV201 (Child screens)

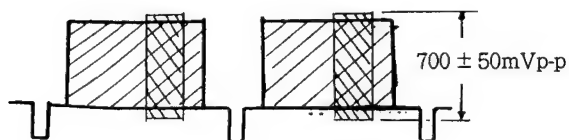


Fig. 9-40.

### 9-7-4. (b) V OUT SUB Colour Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	RJ-6 board (EURO-AV OUT)
Measurement equipment	Vectorscope
Adjustment element	RV201
Specified value	The phases of the parent and child screens should be the same.

#### [Adjustment Method]

- 1) With RV201 match the phases of the parent and child screens.

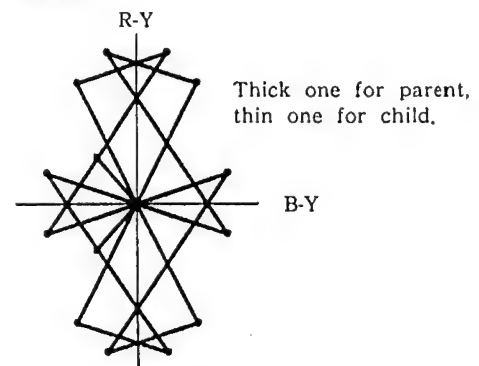


Fig. 9-41.

### 9-7-5. V OUT SUB C Hue Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	RJ-6 board (EURO-AV OUT)
Measurement equipment	Vectorscope
Adjustment element	RV206
Specified value	Hue of parent screen = that of child screen

#### [Adjustment Method]

- 1) With RV206 match the phases of the parent and child screens.

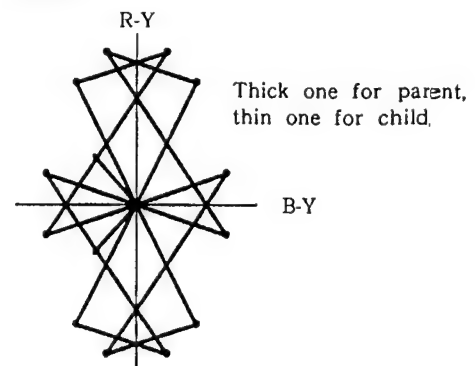


Fig. 9-42.

#### 9-7-6. Write Clock Adjustment (DS-35 Board)

Mode	E-E
Signal	Colour bar
Measurement Point	IC505 pin ①
Measuring Instrument	Frequency counter
Adjustment Element	CV501
Specified Value	$5.00 \pm 0.01\text{MHz}$

##### [Connection]

- 1) Connect the IC505 pin ① and GND with a jumper wire.

**Note :** Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) of high input impedance ( $10\text{M}\Omega$  or more) and low capacity ( $10\text{pF}$  or less).

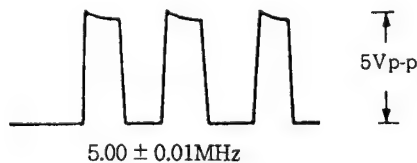


Fig. 9-43.

#### 9-7-7. S OUT SUB C Hue Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar
Measurement Point	S VIDEO OUT
Measuring Instrument	Vectorscope
Adjustment Element	RV204
Specified Value	Hue of parent screen = that of child screen

##### [Adjustment Method]

- 1) With RV204 match the phases of the parent and child screens.

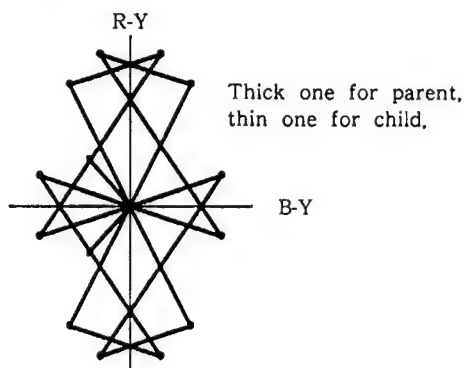


Fig. 9-44.

#### 9-7-8. SUB Y Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar (PAL)
Measurement Point	Pin ⑥ of CN202
Measuring Instrument	Oscilloscope
Adjustment Element	RV203
Specified Value	Less than 0.05V

- 1) Pin ⑩ of IC213 OPEN.



Fig. 9-45.

#### 9-7-9. Color Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar (PAL)
Measurement Point	Pin ⑧ of CN202
Measuring Instrument	Oscilloscope
Adjustment Element	RV205
Specified Value	Less than 0.05V

- 1) Pin ⑩ of IC213 OPEN.

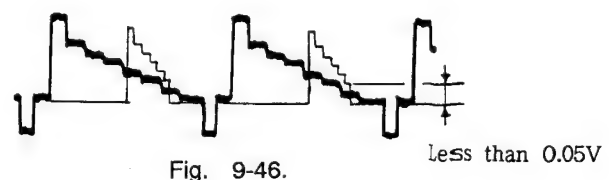


Fig. 9-46.

#### 9-7-10. CG OSC Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar (PAL)
Measurement Point	Pin ⑤ of CN204
Measuring Instrument	Oscilloscope
Adjustment Element	CV201
Specified Value	$6.86 \pm 0.01\text{MHz}$

- 1) Pin ③① of IC204 – Pin ③② of IC204 short.

## 9-8. AUDIO SYSTEM ADJUSTMENT

- Perform adjustment using the color bar signal as the video signal input.

### [Connection of measuring instruments for audio]

In addition to the measuring instruments for the video system, the measuring instruments shown in the figure below are used for the audio system.

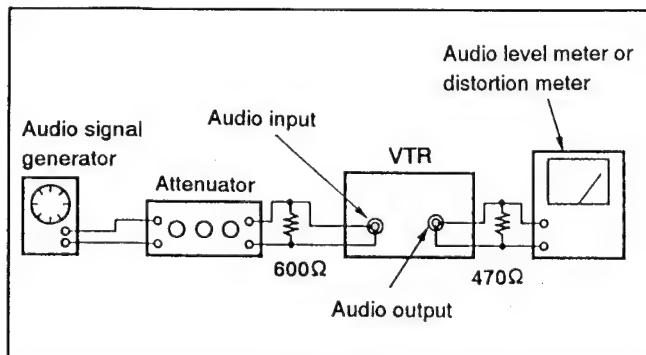


Fig. 9-47.

### [Adjustment procedure]

- 1) PCM Master Clock Oscillation Frequency Adjustment
- 2) REC PCM Level Check
- 3) PCM Playback VCO Free Oscillation Frequency Adjustment
- 4) PCM Playback Level Adjustment
- 5) E-E Output Level Check
- 6) PCM Offset Adjustment
- 7) PCM Recording Level Adjustment
- 8) Overall Frequency Characteristics Check
- 9) Overall Distortion Check
- 10) Overall Noise Level Check

## 9-8-1. PCM Audio System Adjustment

Unless indicated otherwise, set the VTR switches and controls to the following positions for adjustment.

Input select switch ..... LINE  
 Audio monitor switch (PCM/mix/normal) ..... PCM  
 REC LEVEL control ..... 5

**Note:** The adjusting element for the R channel is indicated in [ ].

### 1. PCM master clock oscillation frequency adjustment (PC-39 board)

Mode	REC
Signal	No signal
Measurement Point	Pin ② of IC703
Measuring Instrument	Frequency counter
Adjustment Element	CV701
Specified Value	$11.50 \pm 0.05$ MHz

Adjustment method:

- 1) Connect (Pin ② of IC703) and Pin ⑦ jumper wire.
  - Pin ⑦ of IC703 – GND SHRT
  - Pin ⑧ IC703 – SW 5 V PULL UP by 560 Ω
- 2) Adjust to  $11.50 \pm 0.05$  MHz using CV701.
- 3) Remove the jumper wire.



Fig. 9-48.

### 2. REC PCM level check (PC-39 board)

Mode	REC
Signal	No signal
Measurement Point	Pin ① of CN701
Measuring Instrument	Oscilloscope
Specified Value	Approx. 0.4 Vp-p

Checking method:

- 1) Confirm that the REC PCM level is approximately 0.4 Vp-p.

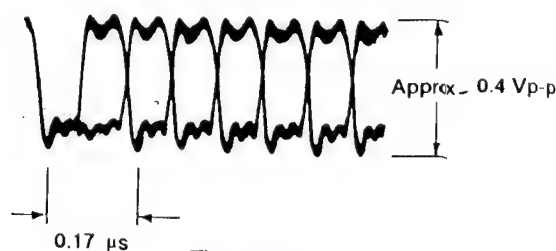


Fig. 9-49.

### 3. PCM playback VCO free oscillation frequency adjustment (PC-39 board)

Mode	Playback, FF index search, and REW index search
Signal	Any tape
Measurement Point	Pin ⑧ of IC708
Measuring Instrument	Frequency counter
Adjustment Element	RV707 (playback) RV709 (FF index search) RV708 (REW index search)
Specified Value	11.50 ± 0.05 MHz (playback) 10.24 ± 0.05 MHz (FF index search) 12.75 ± 0.05 MHz (REW index search)

Connections:

- 1) Connect (Pin ① of IC708) and Pin ⑭ (SW 5 V) of CN601 using a jumper wire.
- 2) Remove CN701 on the PC-39 board.

Adjustment method:

- 1) Set to the playback mode.
- 2) Adjust to 11.50 ± 0.05 MHz using RV707.
- 3) Set to the FF index search mode.
- 4) Adjust to 10.24 ± 0.05 MHz using RV709.
- 5) Set to the REW index search mode.
- 6) Adjust to 12.75 ± 0.05 MHz using RV708.



Fig. 9-50.

### 4. PCM playback level adjustment (PC-39 board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-3CSP or WR4-9CSP) 400 Hz section
Measurement Point	Audio output L and R
Measuring Instrument	Audio level meter
Adjustment Element	RV705
Specified Value	-7.5 ± 0.5 dBs

Adjustment method:

- 1) Adjust to -7.5 ± 0.5 dBs using RV705.

### 5. E-E output level check

Mode	E-E
Signal	400 Hz, -7.5 dBs: audio input L [R]
Measurement Point	Audio output L [R]
Measuring Instrument	Audio level meter
Specified Value	-7.5 ± 3 dBs

Checking method:

- 1) Set the REC LEVEL control to the **5** position.
- 2) Confirm that -7.5 dB is indicated on the REC LEVEL meter.
- 3) Confirm that the audio output L [R] level is -7.5 ± 3 dBs

### 6. PCM offset adjustment (PC-39 board)

Mode	Self-recording and playback (SP mode)
Signal	400 Hz + 3 dBs
Measurement Point	Pin ⑬ [Pin ③] of IC612
Measuring Instrument	Oscilloscope
Adjustment Element	RV701 [RV702]
Specified Value	Even clipping above and below waveform

Adjustment method:

- 1) Perform self-recording and playback, then confirm that there is even clipping above and below the waveform.
- 2) If the amount of clipping is not even, rotate RV701 [RV702] as shown below, and confirm 1) again.

	Rotational direction for RV701 [RV702] as seen from parts side
When amount of upper clipping is smaller	Counterclockwise direction (↺)
When amount of upper clipping is greater	Clockwise direction (↻)

**Note:** Adjust RCH and LCH alternately as they will affect each other.

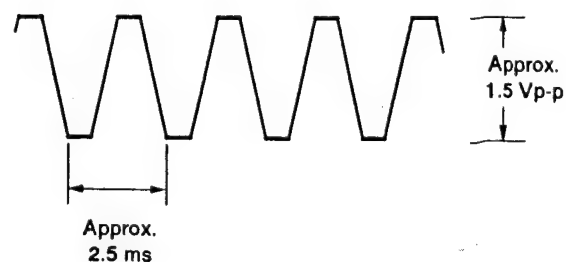


Fig. 9-51.

## 7. PCM recording level adjustment (PC-39 board)

Mode	Self-recording and playback
Signal	400 Hz, -7.5 dBs: audio input (L and R)
Measurement Point	Audio output
Measuring Instrument	Audio level meter
Adjustment Element	RV703
Specified Value	-7.5 ± 0.5 dBs

**Note:** Confirm that "PCM Playback Level Adjustment" has been completed.

Adjustment method:

- 1) Set to the E-E mode.
- 2) Adjust the REC LEVEL control so that the audio output level is -7.5 dBs. (Both left and right channels)
- 3) Record the signal.
- 4) Playback the recorded section.
- 5) Confirm that the audio output L level is -7.5 ± 0.5 dB.
- 6) If the specified value is not satisfied, adjust with RV703 and repeat steps 1) through 5).

## 8. Overall frequency characteristics check

Mode	Self-recording and playback
Measurement Point	Ⓐ 400 Hz, -7.5 dBs Ⓑ 20 Hz, -7.5 dBs Ⓒ 14 kHz, -7.5 dBs :Audio input L [R]
Measuring Instrument	Audio output L [R]
Adjustment Element	Audio level meter
Specified Value	Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 3 dB and the 14 kHz playback output level is 0 <sup>+2</sup> / <sub>-3</sub> dB.

Checking method:

- 1) Adjust the REC LEVEL control so that the audio output L [R] level is -7.5 dBs.
- 2) Record signals Ⓐ through Ⓒ in order.
- 3) Playback the recorded section.
- 4) Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 3 dB and the 14 kHz playback output level is 0 <sup>+2</sup>/<sub>-3</sub> dB.

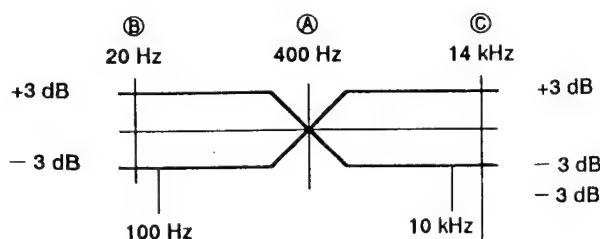


Fig. 9-52.

## 9. Overall distortion check

Mode	Self-recording and playback
Signal	400 Hz, -7.5 dBs: Audio input L [R]
Measurement Point	Audio output L [R]
Measuring Instrument	Distortion meter
Specified Value	Less than 0.35%

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the distortion is less than 0.35%.

## 10. Overall noise level check

Mode	Self-recording and playback
Signal	No signal (Shorting plug inserted into both audio input L and R terminals)
Measurement Point	Audio output L [R]
Measuring Instrument	Audio level meter
Specified Value	Less than -82.0 dBs <sup>*2</sup>

Checking method:

- 1) Record the signal.
  - 2) Playback the recorded section.
  - 3) Confirm that the noise level is less than -82.0 dBs. <sup>\*2</sup>
- <sup>\*2</sup>: Value when IHF-A hearing compensation filter is used.

## 9-8-2. AFM Audio System Adjustment

### [Adjustment Procedure]

- 1) AFM carrier frequency adjustment
- 2) AFM deviation adjustment
- 3) AFM matrix (L - R) adjustment
- 4) AFM matrix (L+R) adjustment
- 5) E-E output level check
- 6) Overall level characteristics check
- 7) Overall frequency characteristics check
- 8) Overall distortion check
- 9) Overall noise level check



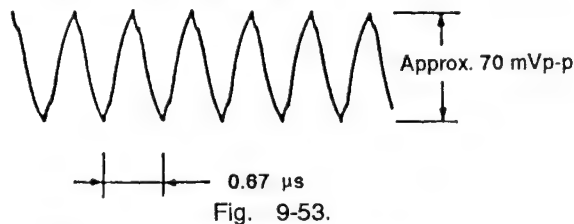
### 1-1. AFM carrier frequency adjustment (1.5 MHz) (PC-39 board)

Mode	REC (SP mode)
Signal	No signal
Measurement Point	Pin ⑬ of IC901
Measuring Instrument	Frequency counter and oscilloscope
Adjustment Element	RV901
Specified Value	1500 ± 3 kHz

Connect the IC401 pin ⑤ and Vcc (+5 V) with a 10 kΩ

Adjustment method:

- 1) Adjust to 1500 ± 3 kHz using RV901.



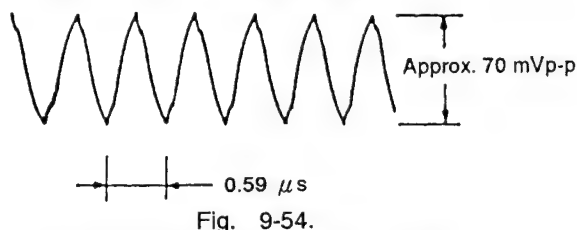
### 1-2. AFM carrier frequency adjustment (1.7 MHz) (PC-39 board)

Mode	REC (SP mode)
Signal	No signal
Measurement Point	Pin ⑬ of IC801
Measuring Instrument	Frequency counter and oscilloscope
Adjustment Element	RV801
Specified Value	1700 ± 3 kHz

Connect the IC401 pin ⑤ and Vcc (+5 V) with a 10 kΩ

Adjustment method:

- 1) Adjust to 1700 ± 3 kHz using RV801.



### 2-1. AFM deviation adjustment (1.5 MHz) (PC-39 board)

Mode	Playback
Signal	Alignment tape: WR5-9CS Operation checking (AFM Bilingual Tape)
Measurement Point	Audio output L
Measuring Instrument	Audio level meter
Adjustment Element	RV902
Specified Value	- 7.5 ± 0.5 dBs

Adjustment method:

- 1) Adjust to - 7.5 ± 0.5 dBs using RV902.

### 2-2. AFM deviation adjustment (1.7 MHz) (PC-39 board)

Mode	Playback
Signal	Alignment tape: WR5-9CS Operation checking (AFM Bilingual Tape)
Measurement Point	Audio output L
Measuring Instrument	Audio level meter
Adjustment Element	RV802
Specified Value	- 7.5 ± 0.5 dBs

Adjustment method:

- 1) Adjust to - 7.5 ± 0.5 dBs using RV802.

### 3-1. AFM matrix (L - R) adjustment (PC-39 board)

Mode	REC
Signal	400 Hz, - 7.5 dBs L, R Common phase signal
Measurement Point	IC801 ③⑥ pin
Measuring Instrument	Audio level meter
Adjustment Element	RV953
Specified Value	Less than - 60 dBs

### 3-2. AFM matrix (L - R) adjustment (PC-39 board)

Mode	Playback
Signal	Playback WR5-9CS the 400 Hz, - 7.5 dBs L, R common phase signal
Measurement Point	IC905 ⑦ pin
Measuring Instrument	Audio level meter
Adjustment Element	RV952
Specified Value	Less than - 35 dBs

### 4-1. AFM matrix (L+R) adjustment (PC-39 board)

Mode	REC
Signal	400 Hz, - 7.5 dBs L, R Anti-phase signal
Measurement Point	IC901 ③⑥ pin
Measuring Instrument	Audio level meter
Adjustment Element	RV951
Specified Value	Less than - 60 dBs

#### 4-2. AFM matrix (L+R) adjustment (PC-39 board)

Mode	Playback
Signal	Playback WR5-9CS the 400 Hz, - 7.5 dBs L, R anti-phase signal
Measurement Point	IC906 ① pin
Measuring Instrument	Audio level meter
Adjustment Element	RV954
Specified Value	Less than - 35 dBs

#### 5. E-E output level check

Mode	E-E
Signal	400 Hz, -7.5 dBs: Audio input (Both L and R channels)
Measurement Point	Audio output L [R]
Measuring Instrument	Audio level meter
Specified Value	- 7.5 ± 3 dBs

Checking method:

- 1) Confirm that the audio output L [R] level is - 7.5 ± 3 dBs.

#### 6. Overall level characteristics check

Mode	Recording (SP mode)
Signal	400 Hz, -7.5 dBs: Audio input (Both L and R channels)
Measurement Point	Audio output L or R
Measuring Instrument	Audio level meter
Specified Value	7.5 ± 3 dBs

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the audio output level is -7.5 ± 3 dBs.

#### 7. Overall frequency characteristics check

Mode	Self-recording and playback
Signal	① 400 Hz, -20 dBs ② 30 Hz, -20 dBs ③ 14 kHz, -20 dBs : Audio input (Both L and R channels)
Measurement Point	Audio output L or R
Measuring Instrument	Audio level meter
Specified Value	Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB.

Checking method:

- 1) Record signals ① through ③ in order.
- 2) Playback the recorded section.
- 3) Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB.

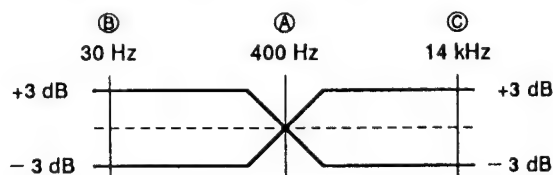


Fig. 9-55. AFM overall frequency response

#### 8. Overall distortion check

The specified value for LP mode is shown in [ ].

Mode	Self-recording and playback
Signal	400 Hz, -7.5 dBs: Audio input (Both L and R channels)
Measurement Point	Audio output L or R
Measuring Instrument	Distortion meter
Specified Value	Less than 0.5% [1.0%] *1

Checking method:

- 1) Record the signal.
  - 2) Playback the recorded section.
  - 3) Confirm that the distortion is less than 0.5% [1.0%].\*1
- \*1: Value when the filter for distortion measurement is used (Fig. 8-52.). Distortion should be less than 1.0% [2.0%] when the filter is not used.

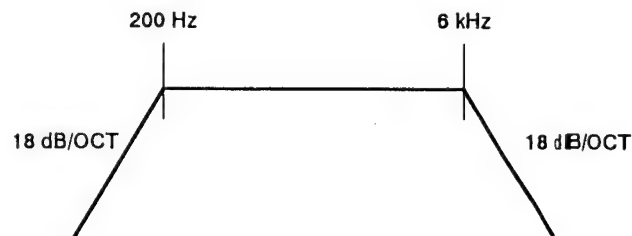


Fig. 9-56. Filter for distortion measurement

## 9. Overall noise level check

Mode	Self-recording and playback
Signal	No signal (Shorting plug inserted into both audio input L and R terminals)
Measurement Point	Audio output L or R
Measuring Instrument	Audio level meter
Specified Value	Less than -62 dBs *2

Checking method:

- 1) Record the signal.
  - 2) Playback the recorded section.
  - 3) Confirm that the noise level is less than -62 dBs.\*2
- \*2: Value when IHF-A hearing compensation filter is used.

## 9-9. TUNER SYSTEM ADJUSTMENT

### 9-9-1. RF AGC Adjustment (IF001 Unit/TU-100 Board)

Signal	Broadcast TV signal
Adjustment element	VR of IF001 unit

[Adjustment Method]

- 1) Adjust the monitor TV to a maximum contrast.
- 2) Turn the VR to make snow noise visible.
- 3) Turn the VR in an opposite direction and set it to the point where the snow noise disappears.
- 4) Receive each channel and confirm that there are no beat picture corruption snow noises due to cross modulation.

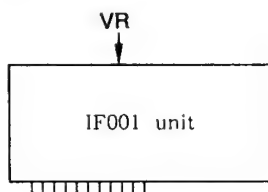


Fig. 8-28.

### 9-9-2. Receive Separation (MPX) Adjustment (TU-100 Board)

Signal	Stereo Lch : 400 Hz, 100% modulation (AERIAL IN of RF) Rch : No modulation
Connection point	Audio line output: L and R channels
Measurement equipment	Oscilloscope
Adjustment element	RV001

[Setting of The Switch]

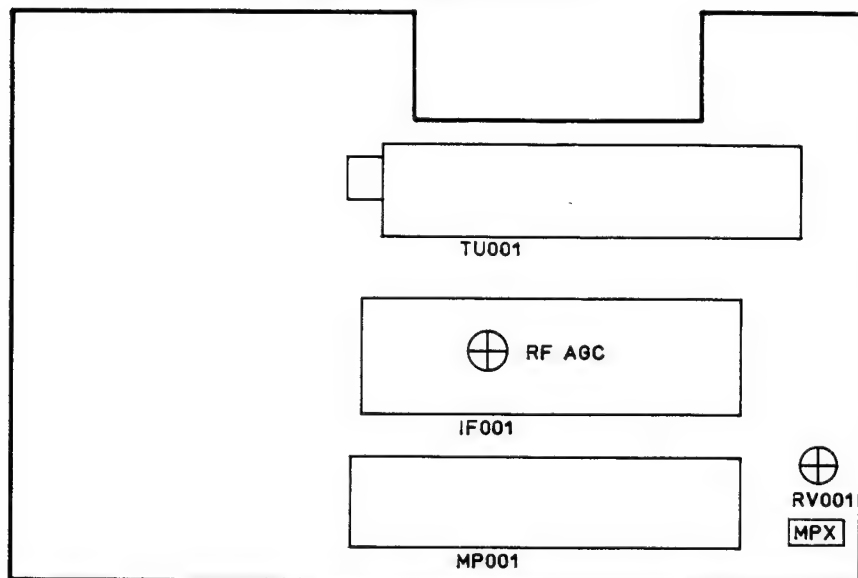
RV101-L (FR-4 board) ... Center click  
RV101-R (FR-4 board) ... Center click

[Adjustment Method]

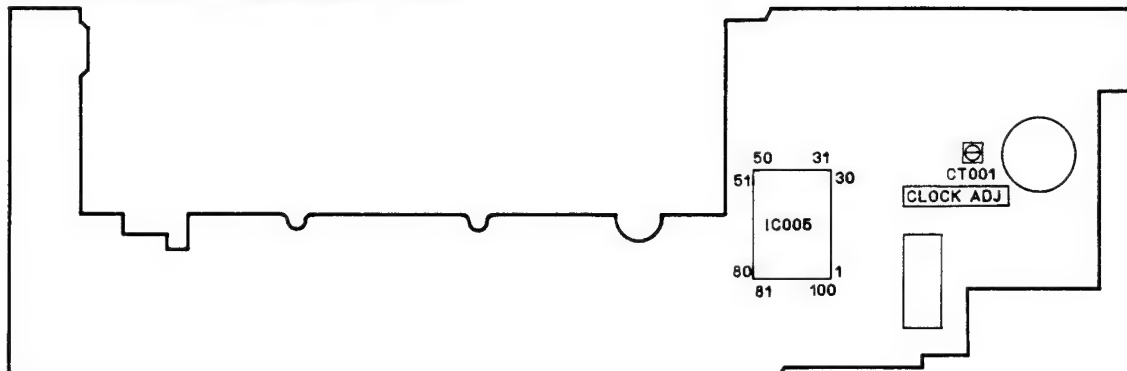
- 1) Set the sound multiplex signal generator in the Stereo mode, and set only Lch to 400Hz, 100% modulation.
- 2) Connect the oscilloscope to the Rch of Audio Line Output.
- 3) Adjust RV001 to minimize Rch output.  
When this is done, do not fully turn RV001.  
(The "STEREO" indicator must be illuminated).

# 9-10. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

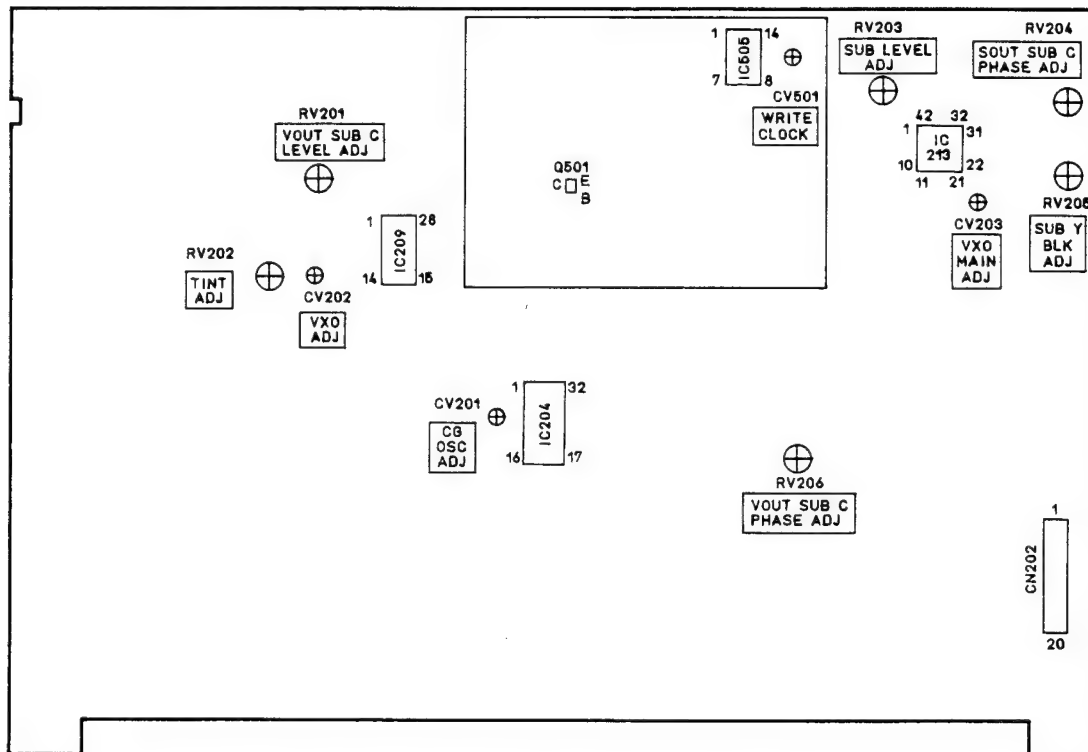
TU-100 BOARD ( COMPONENT SIDE )



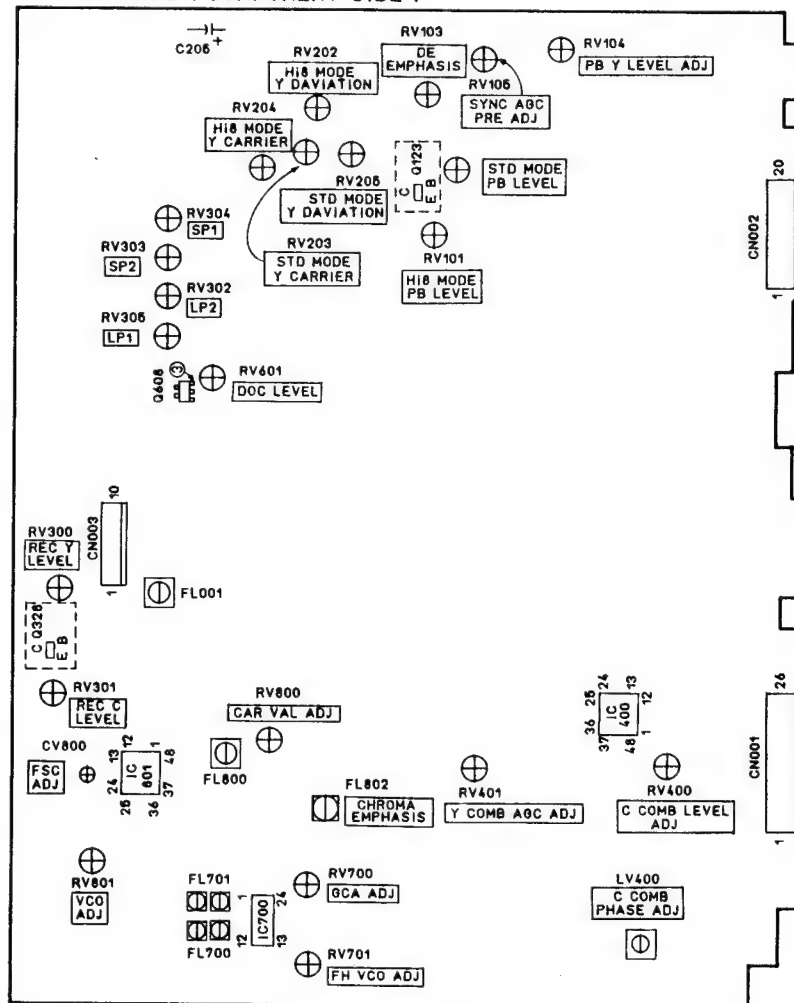
FL-24 BOARD ( COMPONENT SIDE )



DS-35 BOARD ( COMPONENT SIDE )

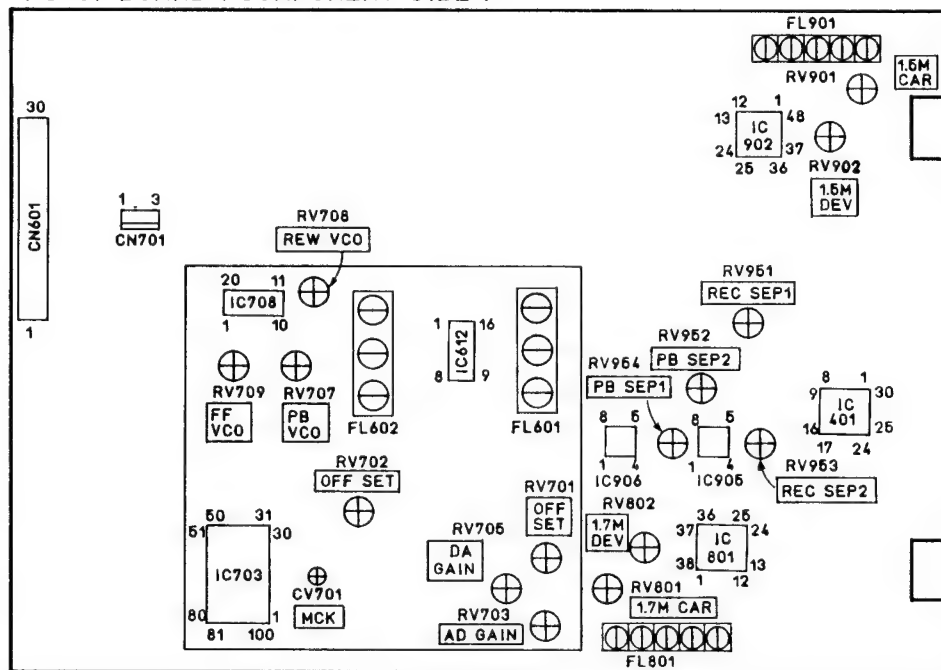


VI-65 BOARD ( COMPONENT SIDE )

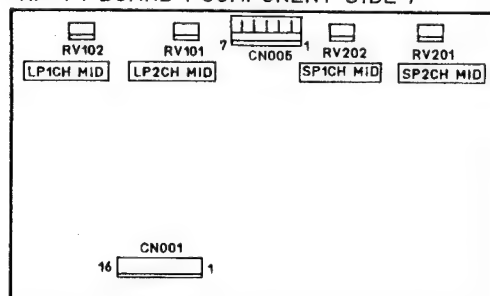




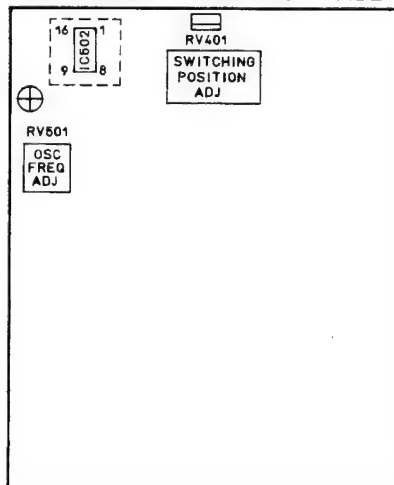
PC-39 BOARD ( COMPONENT SIDE )



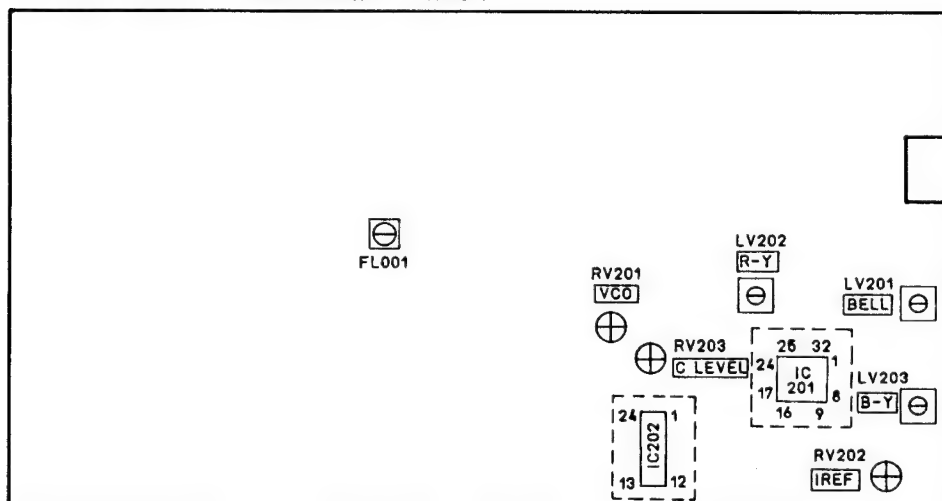
RP-74 BOARD ( COMPONENT SIDE )



CM-15 BOARD ( COMPONENT SIDE )



YC-64 BOARD ( COMPONENT SIDE )

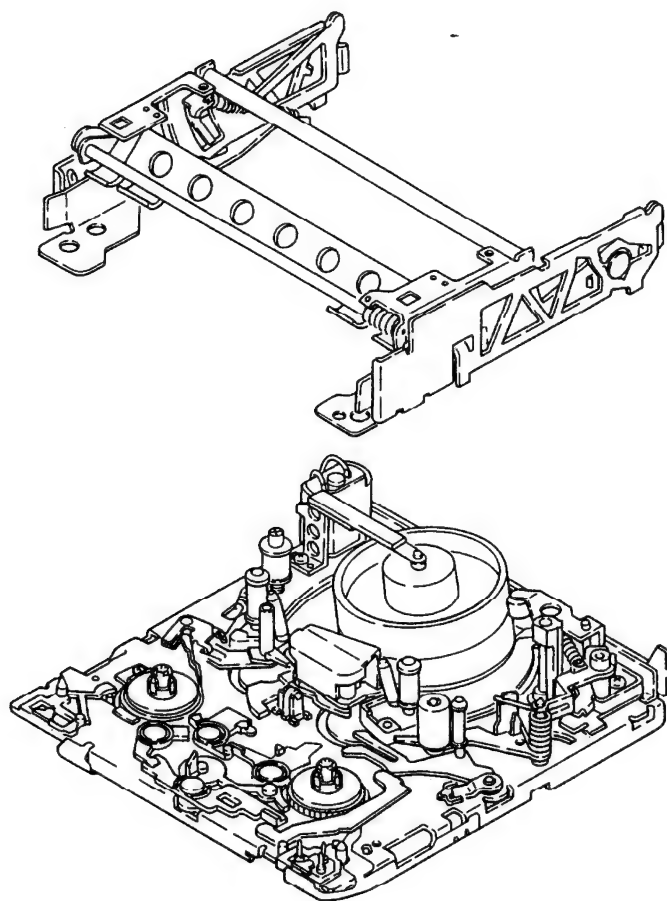


# mm Video MECHANICAL ADJUSTMENT MANUAL III

## U MECHANISM

Video 8

Please use in conjunction with the SERVICE MANUAL.



**8** MECHANISM DECK  
**SONY**®

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## 1. PREPARATIONS FOR MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT

**Note:** For removal of the cabinet, the boards, the cassette compartment, etc., refer to the service guides.

### 1-1. OPERATION WITHOUT CASSETTE COMPARTMENT ASSEMBLY AND TAPE

**Note:** The unit will not work if exposed to a strong light.

#### 1-1-1. How to Trigger the Loading Operation (See Fig. 1-1.)

- 1) Supply power to the unit after removing the cabinet, the camera block, the cassette compartment assembly, etc., as indicated in the service guides. (This will enable operation of the mechanical deck.)
- 2) Cover the LED assembly with an opaque cap, etc. ①.
- 3) Attach a piece of tape to the RECOG switch ② so that the pin is held down.
- 4) Push the EJECT lever ③ in the direction of the arrow ④.

#### 1-1-2. Setting the Playback Mode (See Fig. 1-1.)

- 1) Follow the procedures in section 1-1-1. above.
- 2) Put the rubber band ⑤ around the S and T reels.
- 3) Press the PLAY switch of unit, then push the tension regulator arm assembly ⑥ in the direction of the arrow ⑦ when the T reel starts to rotate (the tension regulator band will be released, and the S reel will start rotating).
- 4) To stop operation, press the STOP switch.

#### 1-1-3. Eject Operation (See Fig. 1-1.)

- 1) To eject, turn the EJECT switch on.

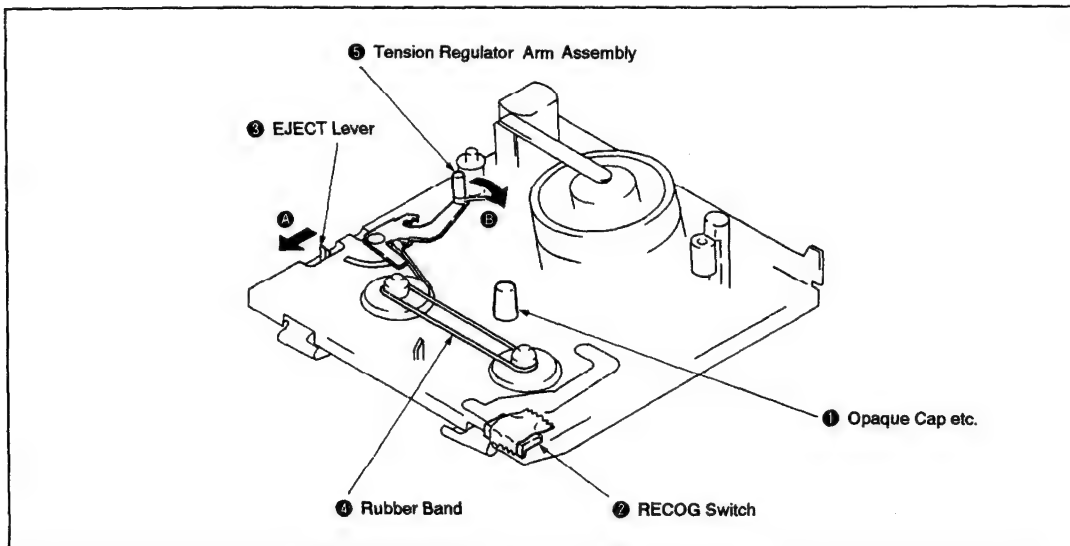


Fig. 1-1.

## 1-2. THE MODE SELECTOR

### 1-2-1. Name of Each Part (external) (See Fig. 1-2.)

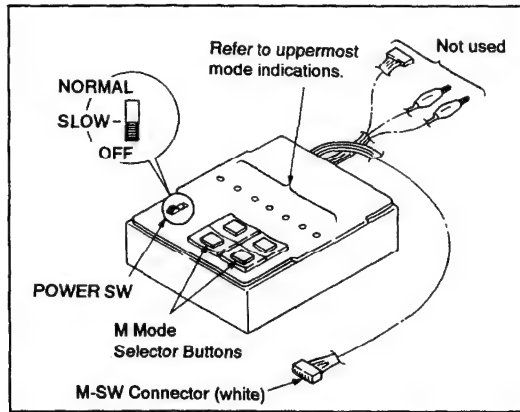


Fig. 1-2.

### 1-2-2. Connections (See Fig. 1-3.)

- 1) Mount the MODE SELECTOR III panel (Ref. No. J-9) ① onto the mode selector.
- 2) Attach the conversion connector (Ref. No. J-8) ③ of MODE SELECTOR III to the 6-pin connector (white) ② of the mode selector M-SW.
- 3) Remove the FP-89 flexible board ⑤ from the flexible connector ④.
- 4) Attach the FP-89 flexible board ⑤ to the flexible connector ⑥ of the MODE SELECTOR III conversion connector ③, then attach the 2-pin connector (white) ⑧ of the loading motor to the 2-pin connector (white) ⑦.

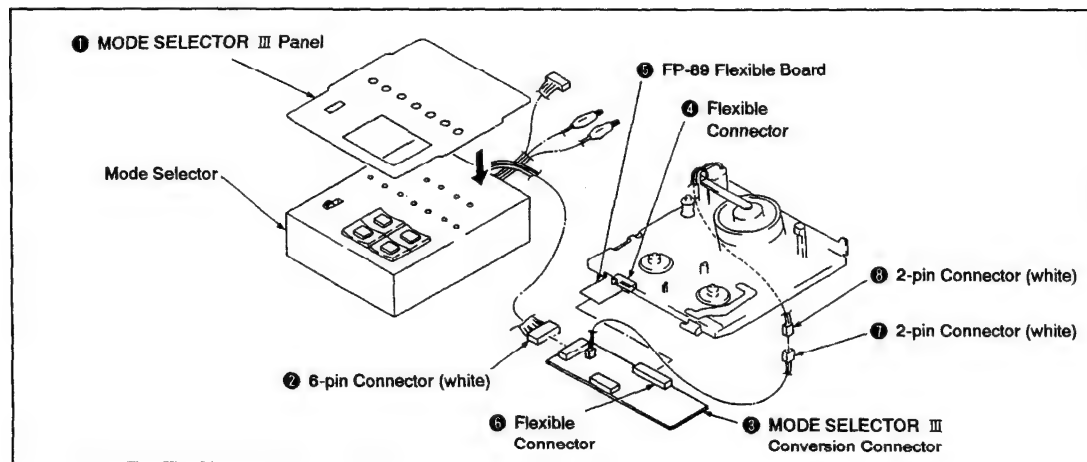


Fig. 1-3.

### 1-2-3. Handling (See Figs. 1-2. and 1-4.)

- Use only the M mode selector buttons.
- Refer to mode indications on the uppermost part of the MODE SELECTOR III panel.
- If the right M mode selector button is kept pressed, the lit indication will change in the order of EJECT → (IA) → ULD → (IB) → STOP → (IC) → FWD.
- To change modes in the reverse direction (from FWD to EJECT), press the left selector button.

**Note:** For this U mechanism, the uppermost indicators on the MODE SELECTOR III panel are used. The IA, IB and IC indications light up during mode changes.

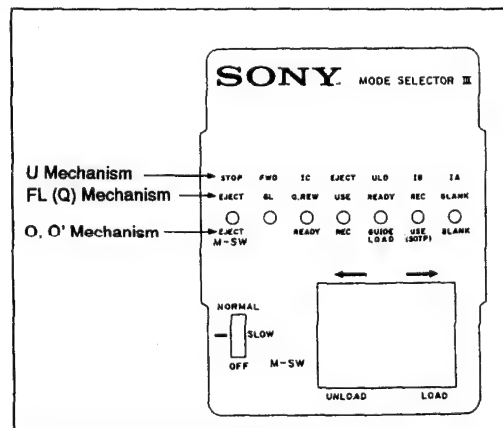


Fig. 1-4.



## 2. PERIODICAL CHECK AND MAINTENANCE (See Fig. 2-1.)

The following periodical check and maintenance procedures are necessary to ensure proper operation and to protect the tapes as well as the unit, and the following maintenance procedures must be always carried out after repairing regardless of how long the unit has been used.

### 2-1. ROTARY DRUM ASSEMBLY CLEANING

- 1) While pressing a piece of chamois leather (Ref. No. J-2) moistened in cleaning fluid (Ref. No. J-1) lightly against the rotary drum, turn the rotary upper drum slowly counter-clockwise with your fingers.

**Note:** Do not drive the drum with the motor, and do not turn it clockwise.

Do not move the chamois leather vertically against the head tip; this can damage the head tip. Strictly follow the cleaning instructions above.

### 2-2. TAPE PATH CLEANING

- 1) Set the cassette compartment assembly to the eject state, or remove it. Then clean the tape path (guides No. 1 to 7, capstan shaft, pinch rollers) with a piece of chamois leather moistened in cleaning fluid (See Fig. 2-1).

### 2-3. DRIVE SYSTEM CLEANING

- 1) Clean the drive system (timing belt, reel table surface) with a piece of cloth moistened in cleaning fluid.

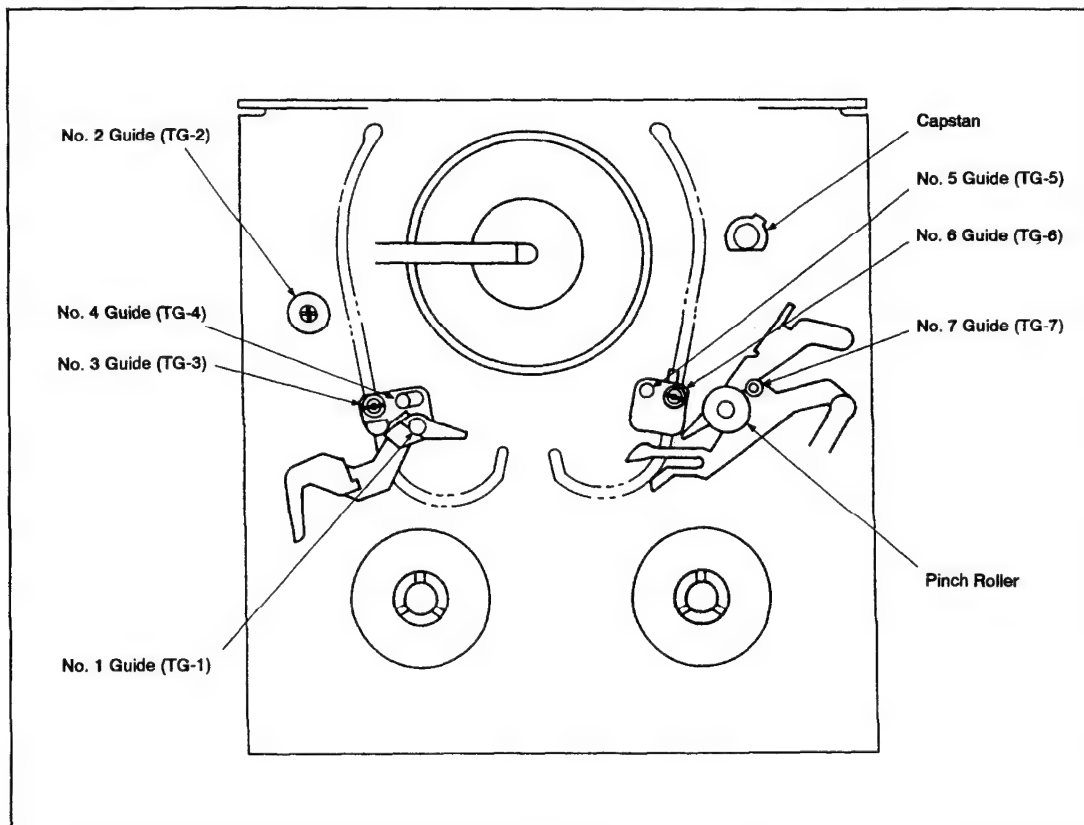


Fig. 2-1.

## 2-4. PERIODICAL CHECK ITEMS

○ Cleaning ◎ Lubrication ☆ Check

Maintenance and Check Item		Operation time (H)										Remarks
		500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	
Cleaning and Demagnetizing	Tape path surfaces Cleaning	○	○	○	○	○	○	○	○	○	○	Do not oil.
	Rotary drum assembly cleaning and demagnetizing	○	○	○	○	○	○	○	○	○	○	Do not oil.
Drive System	Relay belt (short)	—	☆	—	☆	—	☆	—	☆	—	☆	3-728-866-01
	Relay belt (long)	—	☆	—	☆	—	☆	—	☆	—	☆	3-728-865-01
	Capstan shaft	—	◎	—	◎	—	◎	—	◎	—	◎	Take care that no oil gets on tape path surfaces.
	Idler pulley axle	—	◎	—	◎	—	◎	—	◎	—	◎	
	Loading motor	—	☆	—	☆	—	☆	—	☆	—	☆	1-541-612-11
Performance Check	Abnormal noise	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	—	☆	—	☆	—	☆	—	☆	—	☆	
	Brake system	—	☆	—	☆	—	☆	—	☆	—	☆	
	FWD, RVS torque measurement	—	☆	—	☆	—	☆	—	☆	—	☆	

**Notes:** When overhauling the unit, perform parts replacement referring to the table above.

Regarding Oil:

- Always use the specified oil (using oil of different viscosity, etc. can cause troubles of several kinds).  
Specified oil: Part No. 7-661-018-01  
(Mitsubishi Diamond Oil Hydrofluid EP56)
- Be sure that no dirt is mixed in the oil to be used on axle bearings. Use of dirty oil can result in bearing wear and burning.
- By "one drop of oil" is meant the quantity of oil adhering to the end of a 2mm-diameter rod as shown in Fig. 2-2.

On grease:

- Use the specified grease.  
Grease: Part No. 7-662-010-08  
(Sony grease SGL-701)

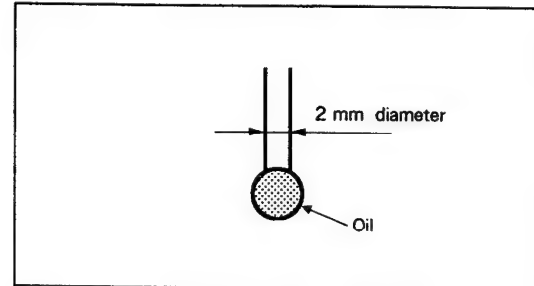



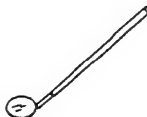
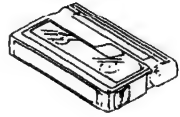
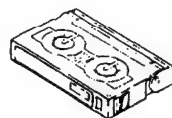

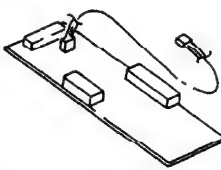
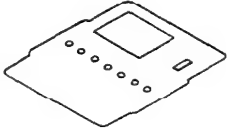
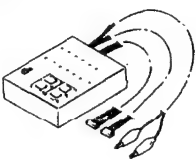
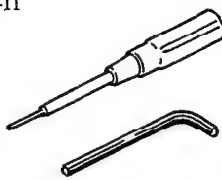
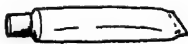


Fig. 2-2.

## 2-5. SERVICING TOOLS

Ref. No.	Name	Part Code	Marking	Application, etc.
J-1	Cleaning fluid	Y-2031-001-0	—	
J-2	Chamois cloth	2-034-697-00	—	
J-3	Head demagnetizer	Commercially available	—	
J-4	Dental mirror Spare mirror	J-6080-029-A J-6080-030-1	SL-5052	Tape path
J-5	Alignment tape NTSC (WR5-1N) PAL (WR5-1C)	8-967-995-01 8-967-995-06		Tape path
J-6	FWD/RVS takeup torque cassette	J-6080-624-A	GD-2086	
J-7	Rotary drum jig	(Attached to the maintenance rotary upper drum)		
J-8	Mode selector III conversion connector	J-6082-021-A		General
J-9	Mode selector III panel	J-6082-023-A		General
J-10	Mode selector	J-6080-825-A		General
J-11	Hexagonal wrench detection (0.89 mm) or L wrench (0.89 mm)	7-700-766-01 7-700-736-06		Tape path
J-12	Sony grease (SGL-701)	7-662-010-08		

Other devices: Oscilloscope  
Analog tester (20 k $\Omega$ )

J-1 	J-2 	J-3 	J-4 
J-5 	J-6 	J-7  (Attached to the maintenance rotary upper drum)	J-8 
J-9 	J-10 	J-11 	J-12 

### 3. MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT

- Notes:**
- Use the mode selector (Ref. No. J-10) for procedures in this chapter.
  - Modes within a frame  are those set by pressing the buttons of the mode selector.

#### 3-1. HC ROLLER ASSEMBLY

##### 1. Removal (See Fig. 3-1.)

- 1) Remove the screw ①, then remove the HC roller assembly ②.

##### 2. Installation (See Fig. 3-1.)

- 1) Align the two dowels ③ attached to the HC roller assembly ② with the two holes ④ in the mechanism chassis.
- 2) Secure the HC roller assembly ② with the screw ①.

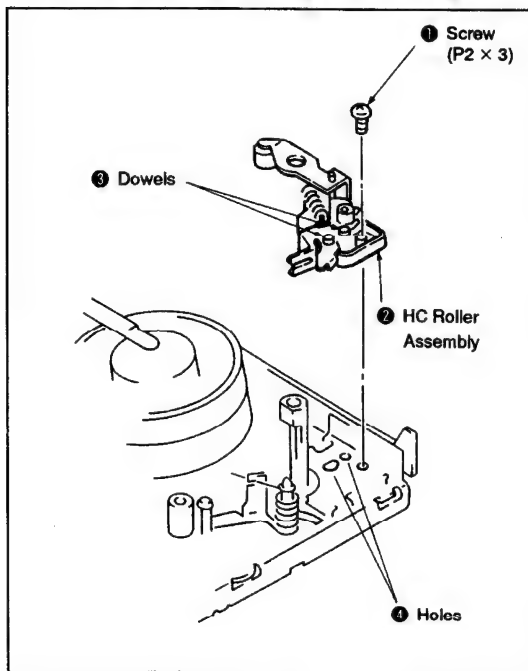


Fig. 3-1.

#### 3-2. GUIDE GUARD ASSEMBLY

##### 1. Removal (See Fig. 3-2.)

- Remove the screw ①, then remove the guide guard assembly ②.

##### 2. Installation (See Fig. 3-2.)

- 1) Align the dowel ③ attached to the guide guard assembly ② with the hole ④.
- 2) Secure the guide guard assembly ② with the screw ①.

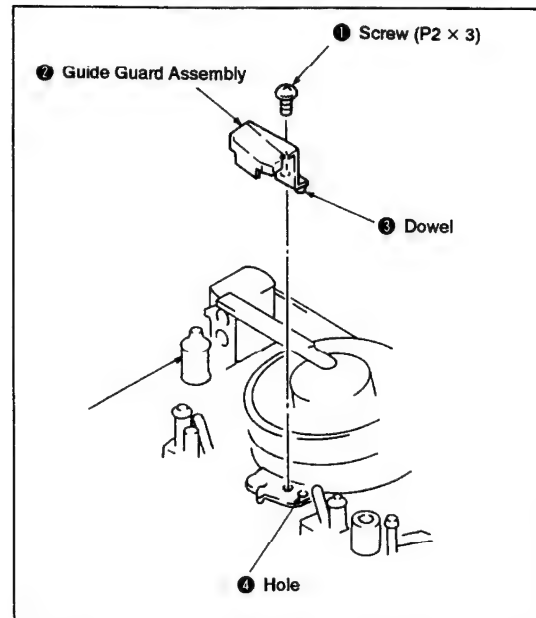


Fig. 3-2.

### 3-3. DC MOTOR (CAPSTAN MOTOR) ASSEMBLY

#### 1. Removal (See Fig. 3-3.)

- 1) Set the **ULD** mode.
- 2) Turn the stopper ① in the direction of the arrow A as far as it will go.
- 3) Remove the two screws ②, then remove the DC motor ③.

#### 2. Installation (See Fig. 3-3.)

- 1) Align the two screwed dowels ④ with the two holes ⑤, then engage the toothed part ⑥ with the connecting gear ⑦.
- 2) Secure the DC motor assembly ③ with the two screws ②.
- 3) Turn the stopper ① in the direction of the arrow B as far as it will go.

**Note:**

- When engaging the gears, take care not to damage their teeth.
- Do not leave any clearance between the DC motor ③ and the chassis.
- Do not touch the capstan motor axle\*, the oil seal\* and the rotor\*.

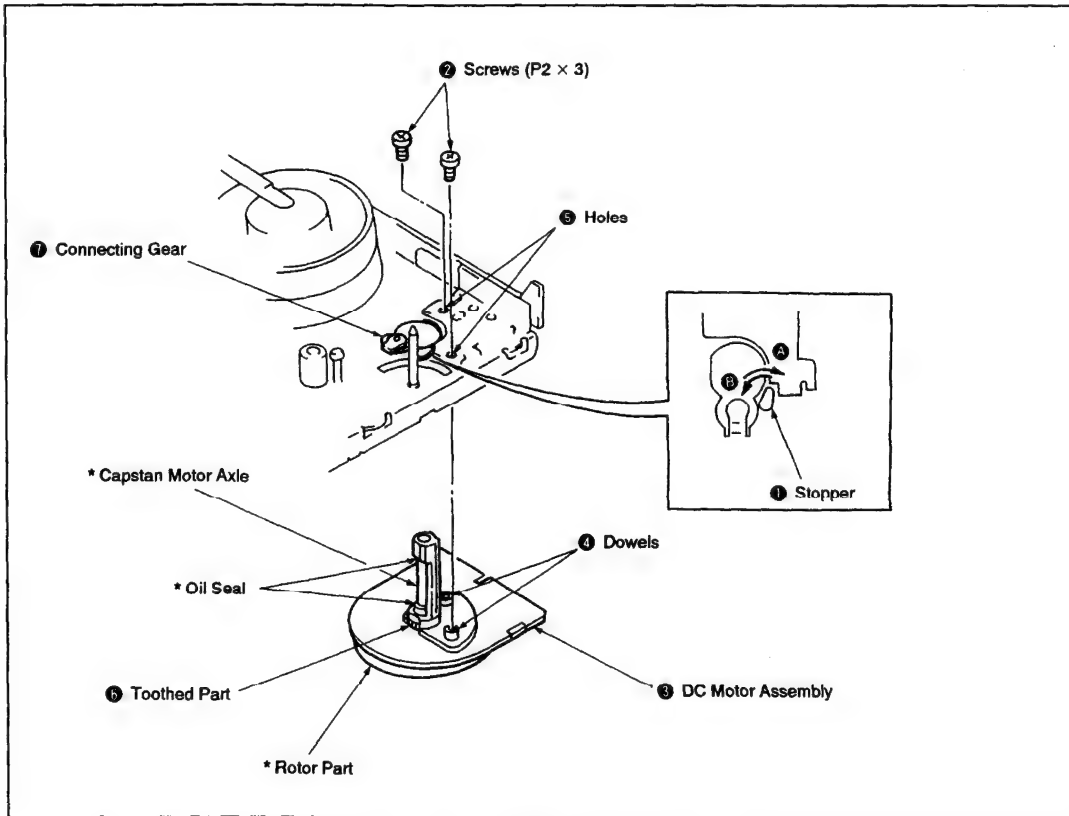


Fig. 3-3.



### 3-4. S BRAKE, T BRAKE

#### 1. Removal (See Fig. 3-4.)

- 1) Remove the torsion coil spring (ST) ①.
- 2) Remove the axle holding pin ②, then remove the T brake ③.
- 3) Remove the axle holding pin ④, then remove the S brake ⑤.

#### 2. Installation (See Fig. 3-4.)

- 1) While fitting the toothed part ⑥ into the notch ⑦, mount the S brake ⑤.
- 2) Insert the axle holding pin ②.
- 3) Insert the axle ⑧ to the S reel side of the brake release arm ④ so that the A part comes closer to the drum than part B, and mount the T brake ③.
- 4) Insert the axle holding pin ④.
- 5) Insert the torsion coil spring (ST) ① below the claw ⑪ of the axle ⑩, then hook it to two claws ⑫.

**Note:** Confirm that the claws of axle holding pins ② and ④ are not broken before assembling.

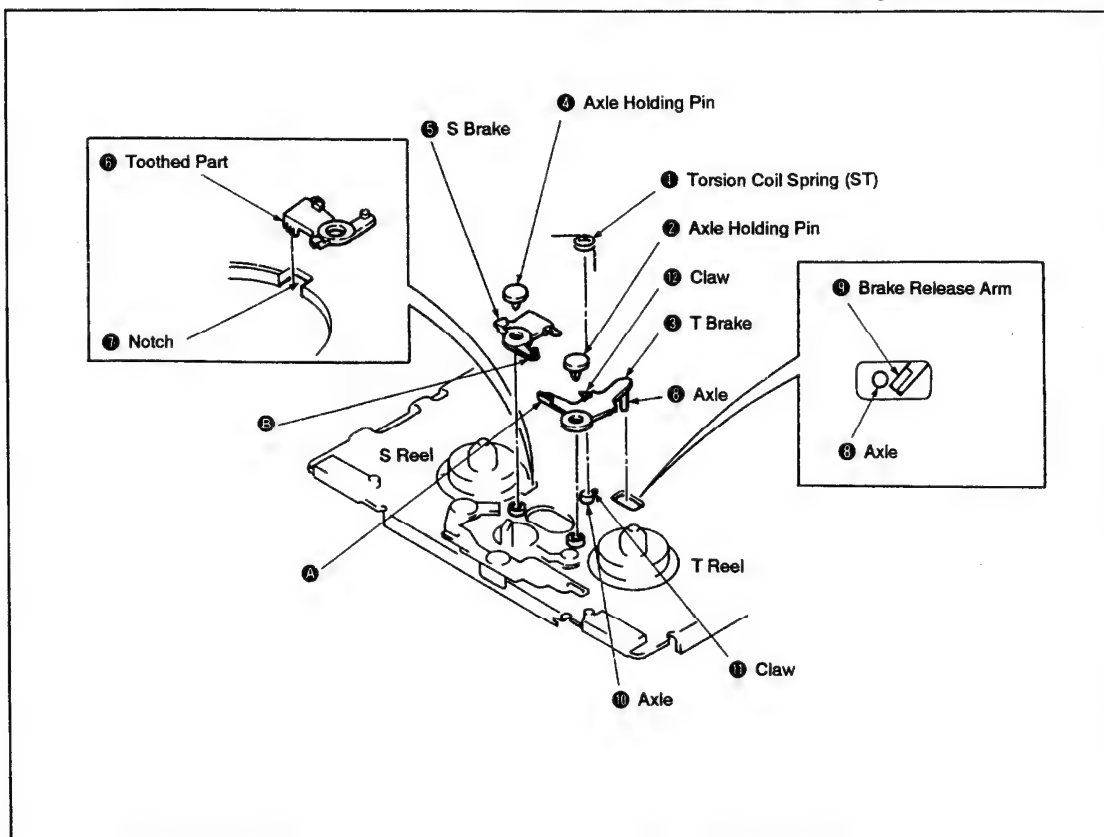


Fig. 3-4.

### 3-5. LB BRAKE, AXLE HOLDING PINS

#### 1. Removal (See Fig. 3-5.)

- 1) Remove the screw ①, then remove the TL holding plate ②.
- 2) Remove the axle holding pin ③, then remove the LB brake ④.
- 3) Remove the axle holding pin ⑤, then remove the LB lever ⑥.

#### 2. Installation (See Fig. 3-5.)

- 1) Mount the LB lever ⑥ matching it to pin ⑦ of the LB gear, then secure it with the axle holding pin ⑤.
- 2) Insert the pin ⑧ into the notch ⑨ of the LB lever ⑥, then mount the LB brake ④ while inserting the toothed part ⑩ into the notch ⑪.
- 3) Insert the axle holding pin ③.
- 4) Align the dowel ⑬ with the hole ⑭, then mount the TL holding plate and secure it with the screw ①.

**Note:** Confirm that the claws of axle holding pins ③ and ⑤ are not broken before assembling.

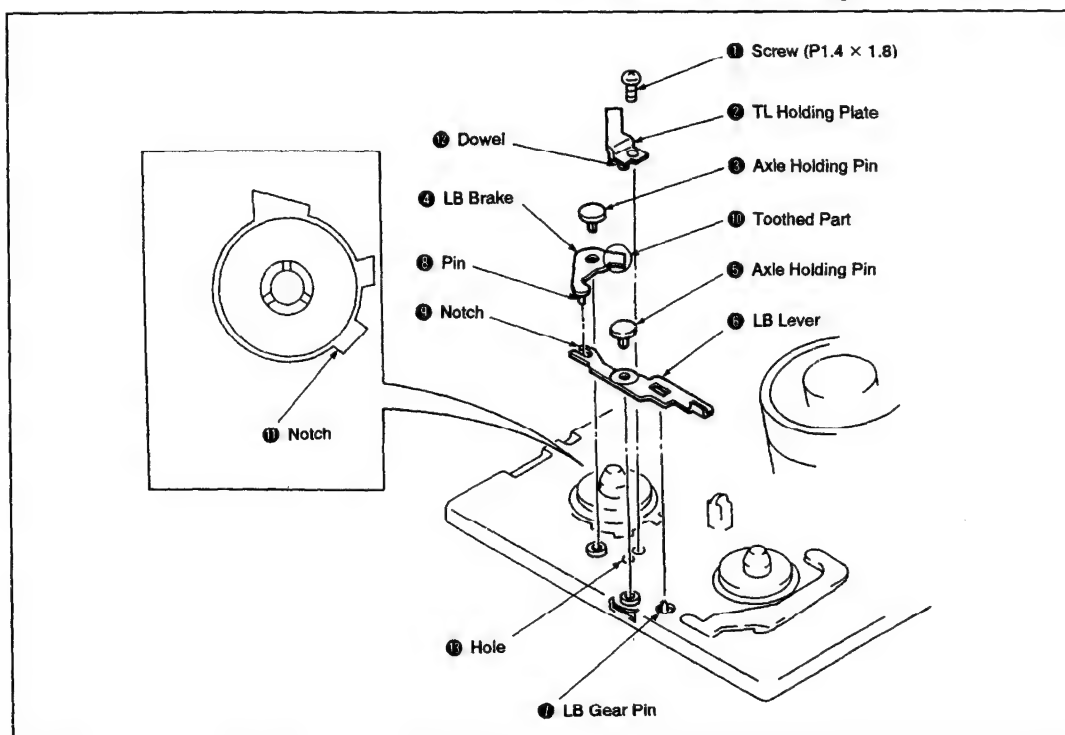


Fig. 3-5.

### 3-6. LB RELEASE ARM

#### 1. Removal (See Fig. 3-6.)

- 1) While pushing the claw ① in the direction of the arrow, remove the LB release arm ②.

#### 2. Installation (See Fig. 3-6.)

- 1) Fit the LB release arm ② to the axle ③, insert protrusions ④, ⑤, ⑥, ⑦ into the three holes ⑧, then secure with the claw ①.

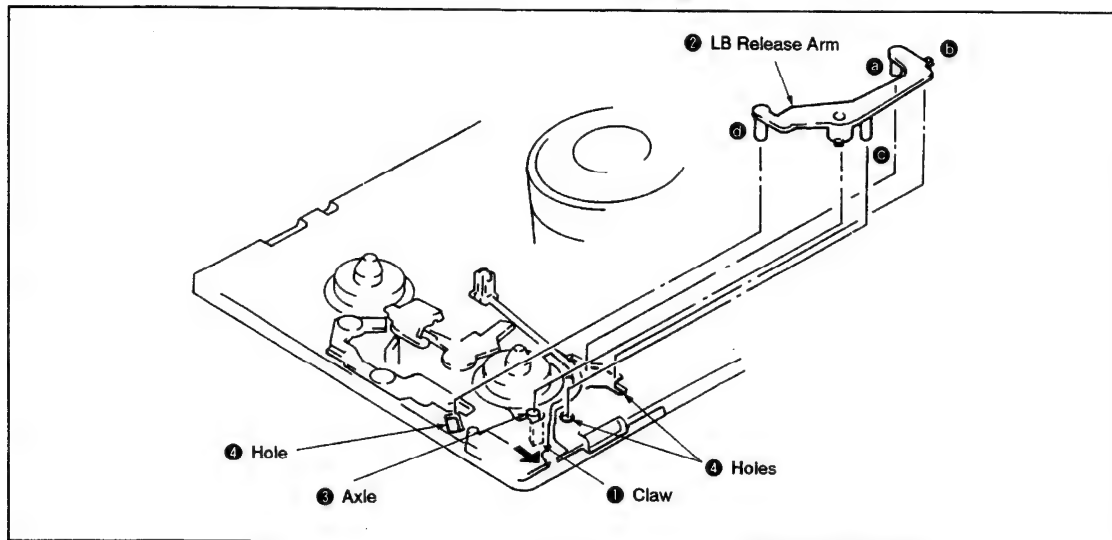


Fig. 3-6.

### 3-7. RK STOPPER, RK STOPPER ARMS

#### 1. Removal (See Fig. 3-7.)

- 1) Remove the torsion coil spring (RK) ①.
- 2) Open the chassis claw ②, then remove the RK stopper arm ③.
- 3) Remove the RK stopper ④.

#### 2. Installation (See Fig. 3-7.)

- 1) Mount the RK stopper ④ onto the axle ⑤.
- 2) Mount the RK stopper arm ③ onto the axle ⑥, insert Pin ⑩ into hole ⑪, then hook the claw ⑦ of the chassis to the hole ⑦.
- 3) Insert the torsion coil spring (RK) ① into the axle ⑤, then hook it to claws ⑧ and ⑨.

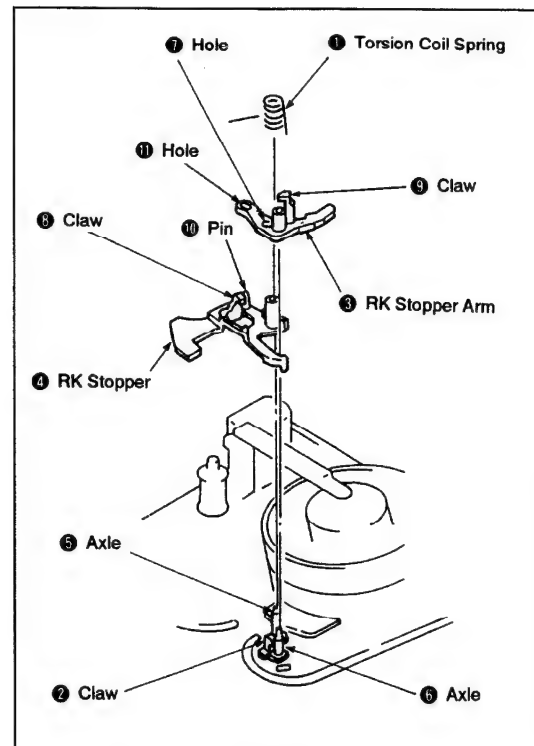


Fig. 3-7.

### 3-8. PINCH ARM ASSEMBLY, TG-7 ASSEMBLY

#### 1. Removal (See Fig. 3-8.)

- 1) Set the **[IB]** mode.
- 2) Remove the stopper washer ①, then remove the pinch arm assembly ②.
- 3) Bend the claw ④ inside hole ③ in the direction of the arrow using a thin screwdriver or the like, then remove the TG-7 plate spring ⑤.
- 4) Remove the TG-7 arm assembly ⑥.

#### 2. Installation (See Fig. 3-8.)

- 1) Grease the inner surfaces of hole ⑦ (See Fig. A).
- 2) Insert the axle ⑧ of the TG-7 arm assembly ⑥ into the hole ⑦.
- 3) Grease the shaded section ⑨ (See Fig. A).
- 4) Insert the TG-7 plate spring ⑤ into the hole ③, then secure it with the claw ④.
- 5) Apply half a drop of oil to the axle ⑨ (See Fig. B).
- 6) Fit the pinch arm assembly ② to the axle ⑨ and insert the pinch roller sub arm assembly tab ⑩ into the ⑪ part.
- 7) Install the stopper washer ①.

**Note:**

- Take care not to grease the screw ⑪ of the TG-7 arm assembly ⑥ (See Fig. A).
- When fitting the pinch arm assembly ② to the axle ⑨, make sure that it does not touch the TG-7 guide ⑫ or the rubber roller ⑬.
- After assembling, be sure to perform tape path adjustment as described in section 4.

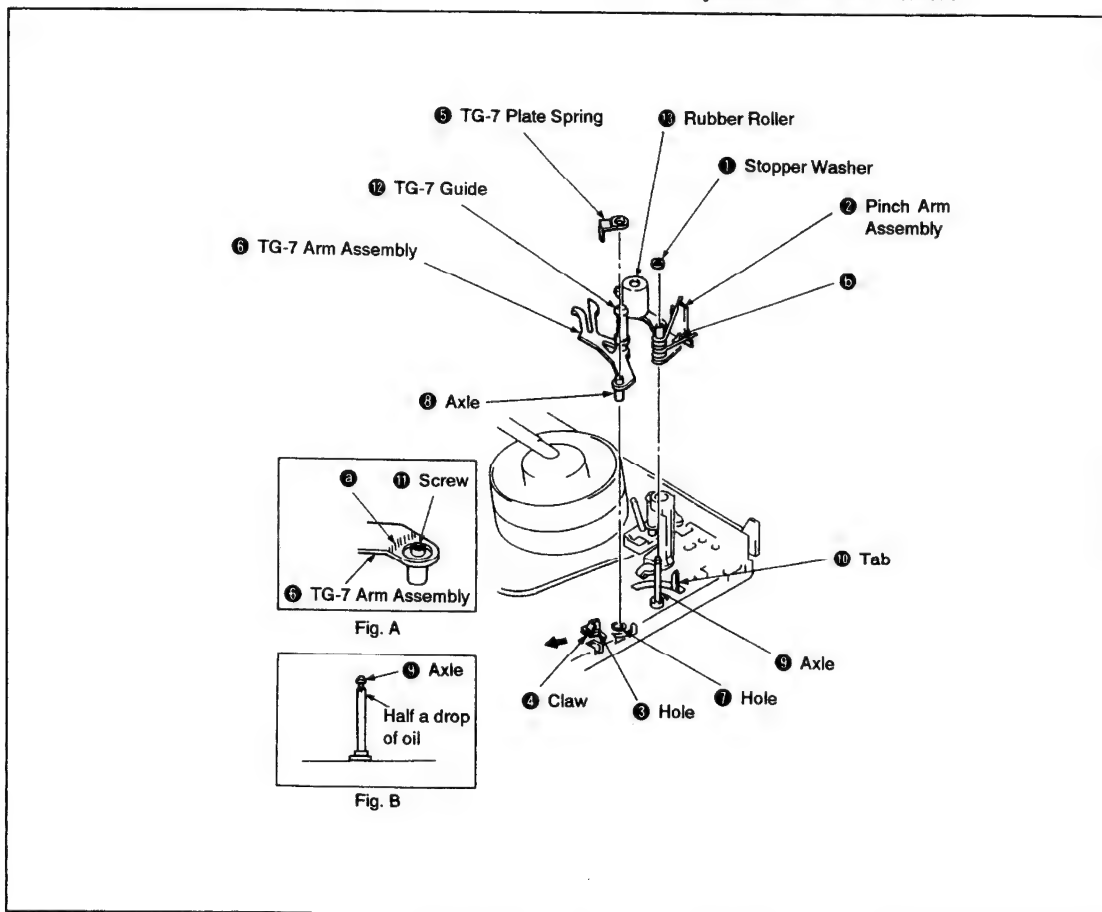


Fig. 3-8.

### 3-9. TG-2 ASSEMBLY

#### 1. Removal (See Fig. 3-9.)

- 1) Remove the TG-2 upper flange assembly ①.
- 2) Remove the TG-2 roller ②, the TG-2 sleeve ③, the TG-2 lower flange ④ and the compression spring ⑤.

#### 2. Installation (See Fig. 3-9.)

- 1) Mount the compression spring ⑤, the TG-2 lower flange ④, the TG-2 sleeve ③ and the TG-2 roller ② to the axle.
- 2) Secure the TG-2 upper flange ① to the axle by rotating it 4 to 6 turns.

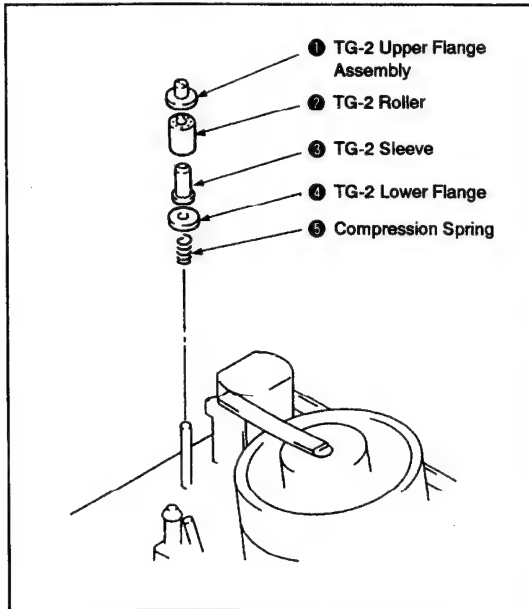


Fig. 3-9.

#### 3. TG-2 Height Preset (see Fig. 3-10.)

- 1) Adjust height from the mechanism chassis upper surface to the TG-2 upper flange ① upper surface to 18.6 mm by turning the TG-2 upper flange ①.

**Note:** After adjustment, be sure to perform tape path adjustment as described in section 4.

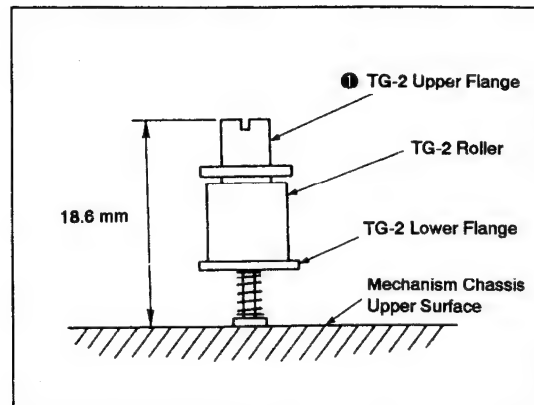


Fig. 3-10.



### 3-10. S REEL TABLE ASSEMBLY, T REEL TABLE ASSEMBLY

#### 1. Removal (See Fig. 3-11.)

- 1) Remove the S brake and T brake as described in section 3-4.
- 2) Remove the TL holding plate as described in section 3-5.
- 3) Remove the tension regulator band assembly as described in section 3-11.
- 4) Remove the S reel table assembly ①.
- 5) Turn the stopper ② approx. 90° in the direction of the arrow ③.
- 6) While sliding the LB release arm ④ in the direction of the arrow ⑤, remove the T reel table assembly ④.

#### 2. Installation (See Fig. 3-11.)

- 1) Apply half a drop of oil to the axle ⑥ (See Fig. A).
- 2) Move the RK gear ⑥ in the direction of the arrow ⑦ and the TS brake ⑦ in the direction of the arrow ⑧, putting them out of the way.
- 3) While sliding the LB release arm ④ in the direction of the arrow ⑤, mount the T reel table assembly ④ onto the axle ⑥, then turn the stopper ② in the direction of the arrow ③ as far as it will go.
- 4) Apply half a drop of oil to the axle ⑥ (See Fig. B).
- 5) Move the RK gear ⑥ in the direction of the arrow ⑦, the UL brake ⑧ in the direction of the arrow ⑨ and the LB brake ⑩ in the direction of the arrow ⑪, putting them out of the way.
- 6) Mount the S reel table ① onto the axle ⑥.
- 7) Mount the tension regulator band assembly as described in section 3-11.
- 8) Mount the TL holding plate as described in section 3-5.
- 9) Mount the S brake and T brake assemblies as described in section 3-4.

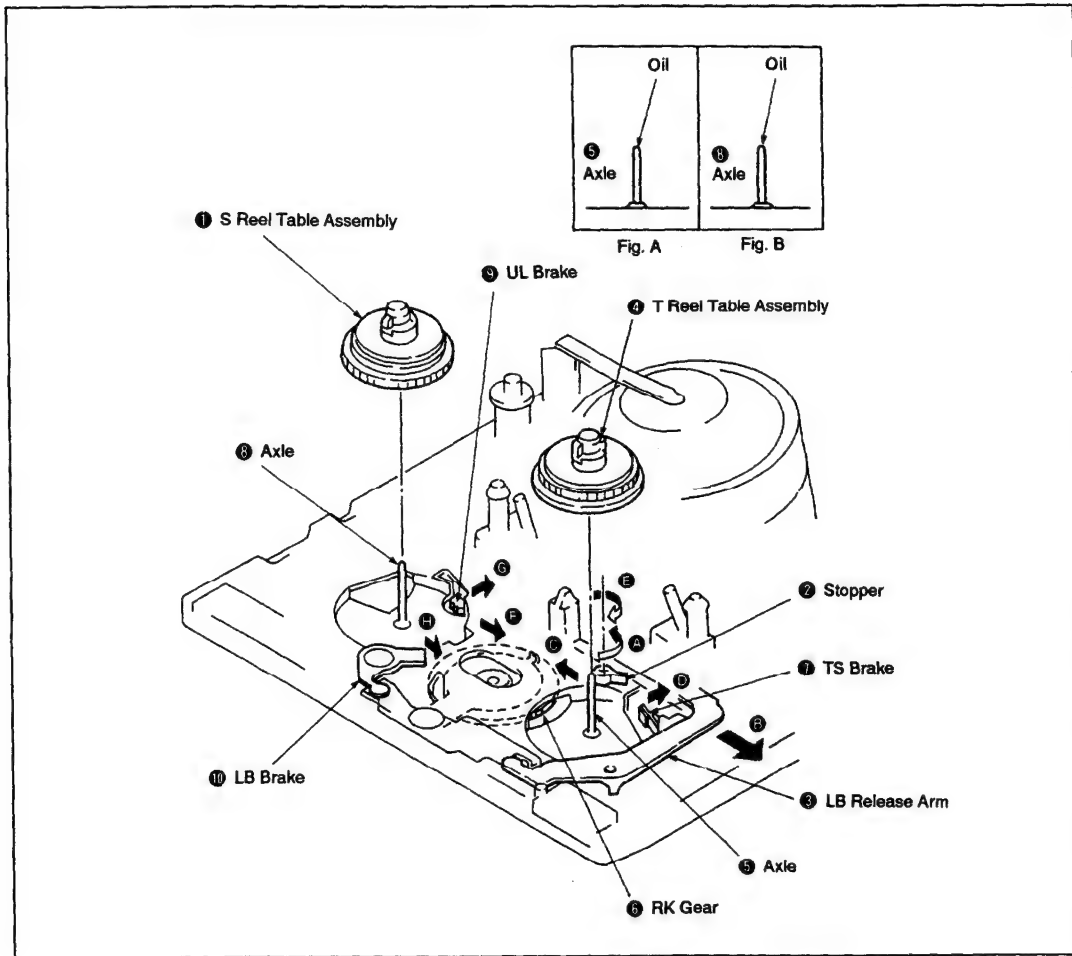


Fig. 3-11.

### 3-11. TENSION REGULATOR BAND ASSEMBLY, TENSION REGULATOR ARM ASSEMBLY

#### 1. Removal (See Fig. 3-12.)

- 1) Remove the TL holding plate as described in section 3-5.
- 2) Remove the screw ①.
- 3) Using a thin screwdriver or the like, remove the tension regulator band assembly ④ from the axle ③ of tension regulator arm assembly ②.
- 4) Remove the tension spring ⑤.
- 5) Remove the stopper washer ⑥ from the back of the mechanism chassis, then remove the tension regulator arm assembly ②.
- 6) Open the claw ⑦, then remove the adjust arm ⑧.

**Note:** When removing the tension regulator band assembly ④, take care not to twist or bend it, and not to touch the felt surface ⑨.

#### 2. Installation (See Fig. 3-12.)

- 1) Engage the adjust arm ⑧ in the position shown in Fig. A, then close the claw ⑦.
- 2) Apply half a drop of oil to the hole ⑩.
- 3) Mount the tension regulator arm assembly ②, then insert it into the slot ⑪ so that the ⑫ part comes to the arrow A side of the switch lever assembly (See Fig. B).

- 4) While holding the tension regulator arm assembly ② from the mechanism chassis front, secure it with the stopper washer ⑥ from the back.
- 5) Hook the R hook of the tension spring ⑤ to the adjust arm ⑧ as shown in the figure, then hook the opposite end to the tension regulator arm assembly ②.
- 6) Mount the tension regulator band assembly ④ onto the axle ③ of tension regulator arm assembly ②, and place it so that the felt surface ⑨ comes against the shaded portion of the S reel table assembly ⑬.
- 7) Mount the tension regulator plate ⑭ of the tension regulator band assembly ④ so that it is aligned with the dowel ⑮ of the mechanism chassis, then secure it temporarily with the screw ①.
- 8) Mount the TL holding plate as described in section 3-5.
- 9) Adjust tension regulator FWD position as described in section 3-12.
- 10) Perform adjust arm adjustment as described in section 3-22.

**Note:** When mounting the tension regulator band assembly ②, take care not to twist or bend it, and not to touch the felt surface ⑨.

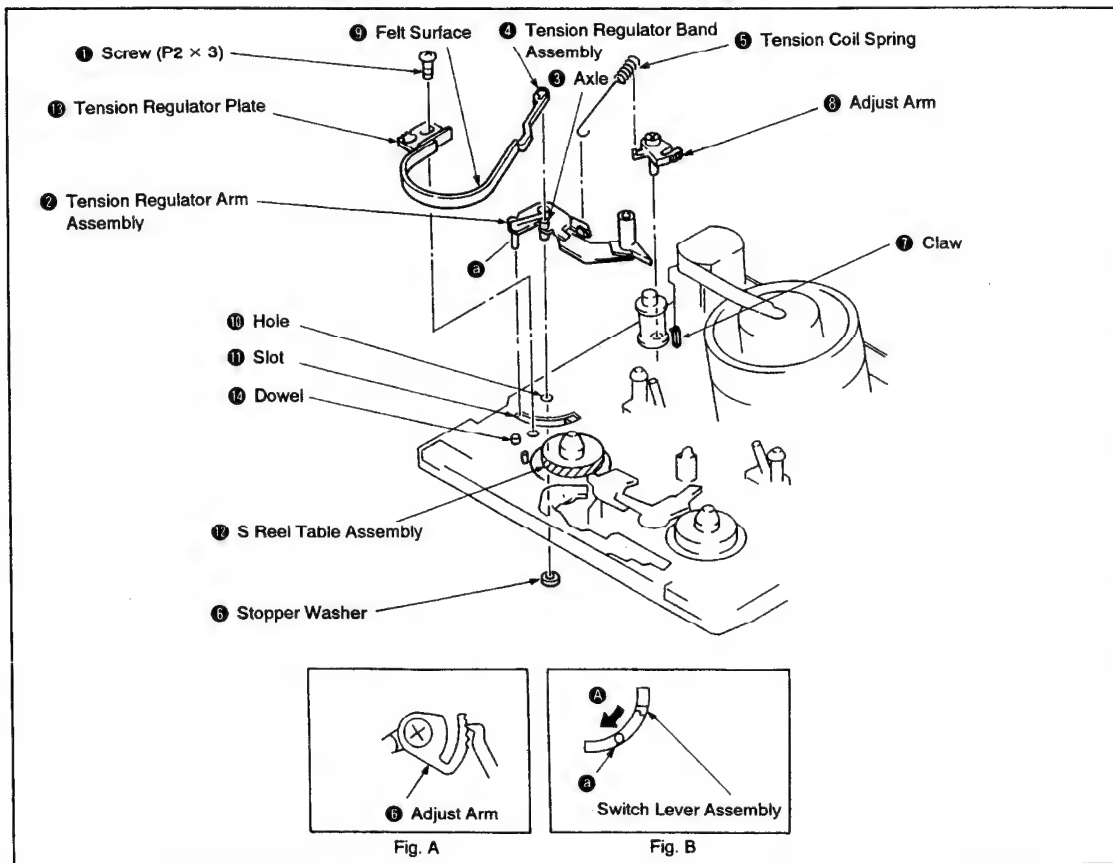


Fig. 3-12.

### 3-12. TENSION REGULATOR FWD POSITION PRESET (See Fig. 3-13.)

- 1) Load a cassette tape and set the **[FWD]** mode.
- 2) Confirm whether the distance between ❶ part of the tension regulator arm and the groove ❷ of the chassis is  $1.1 \pm 0.3$  mm. If this distance is not within the specified range, remove the cassette tape and perform the following adjustment.
- 3) Loosen the fixing screw ❹ of the tension regulator band assembly ❸.
- 4) Slide the tension regulator plate ❺ in the direction of the arrow **A** if the measured distance is over the specified range, and in the direction of the arrow **B** if it is under that range. Then, fix it with the screw ❹.
- 5) Repeat steps 1) and 2) and confirm that the distance is within the specified range.

**Note:** Use a cassette with the tape advanced halfway.

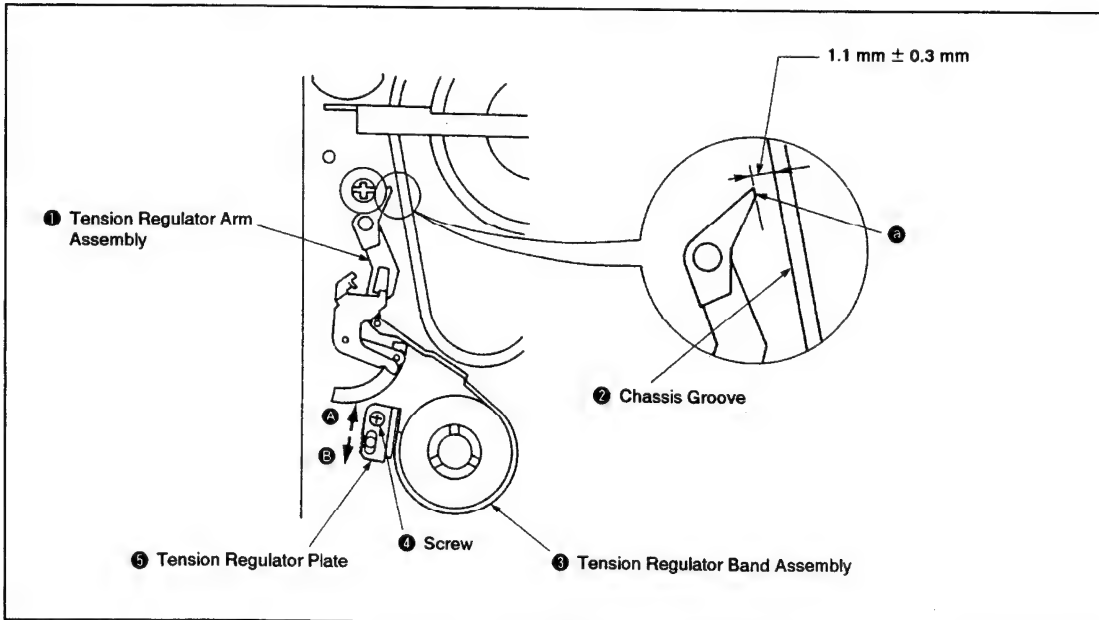


Fig. 3-13.

### 1. Removal (See Fig. 3-14.)

- Note:**
- When removing the drum assembly ⑥ from the mechanism chassis, take care not to cut the flexible board ① or the harness.
  - Take care not to touch the head tip ⑨.

- 1) Insert part **6** of the dew sensor **8** into the notch **11** of the mechanism chassis, then secure it with the screw **7**.
- 2) Mount the connector **10**.
- 3) Clamp the harness **15** of the dew sensor **8** with the reinforcing the claw **16** of the plate SS assembly (See Fig. A).
- 4) Insert the connector **2** and the flexible board **1** into the hole **12** of the mechanism chassis, align the drum assembly **6** with the two dowels **13** and secure it with the three screws **5**.
- 5) Align the axle ground terminal **2** with the two dowels **14** of the mechanism chassis and secure it with the screw **3**.
- 6) Mount the guide guard assembly as described in section 3-2.
- 7) Mount the two connectors **2** and the flexible board **1**.

- 

— 18 —

### 3-14. EJECT LEVER, SWITCH LEVER ASSEMBLY, PINCH ROLLER SUB ARM ASSEMBLY

#### 1. Removal (See Fig. 3-15.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Set the **STOP** mode.
- 3) Remove the claw ①, then remove the eject lever ②.
- 4) Remove the stopper washer ③, then remove the switch lever assembly ④.
- 5) Remove the pinch roller load spring ⑤.
- 6) Remove the stopper washer ⑥, then remove the pinch roller sub arm assembly ⑦.

#### 2. Installation (See Fig. 3-15.)

- 1) Grease the axle ⑧ (See Fig. A).
- 2) Assemble by inserting ⑧ part of the pinch roller sub arm assembly ⑦ into the slot ⑨, then insert the pin ⑩ into the loading lever assembly notch ⑪.
- 3) Secure with the stopper washer ③.

- 4) Mount the pinch roller load spring ⑤ by catching its ⑫ end between the claw ① and the chassis side and its ⑬ end to the claw ①.
- 5) Apply half a drop of oil to the axle ⑭ (See Fig. B).
- 6) Align the groove ⑮ of the switch lever assembly ④ with the mode detector switch protrusion ⑯, mount it on the axle ⑭, then insert the pin ⑩ into the drive gear (left) assembly ⑰ outer groove.
- 7) Secure with the stopper washer ③.
- 8) Mount the eject lever ② and close the claw ①.
- 9) Mount the DC motor (capstan motor) as described in section 3-3.

**Note:** When mounting the switch lever assembly ④ onto the axle ⑭ with the tension regulator arm assembly installed, set the pin ⑩ to the arrow ② side of the switch lever assembly ④.

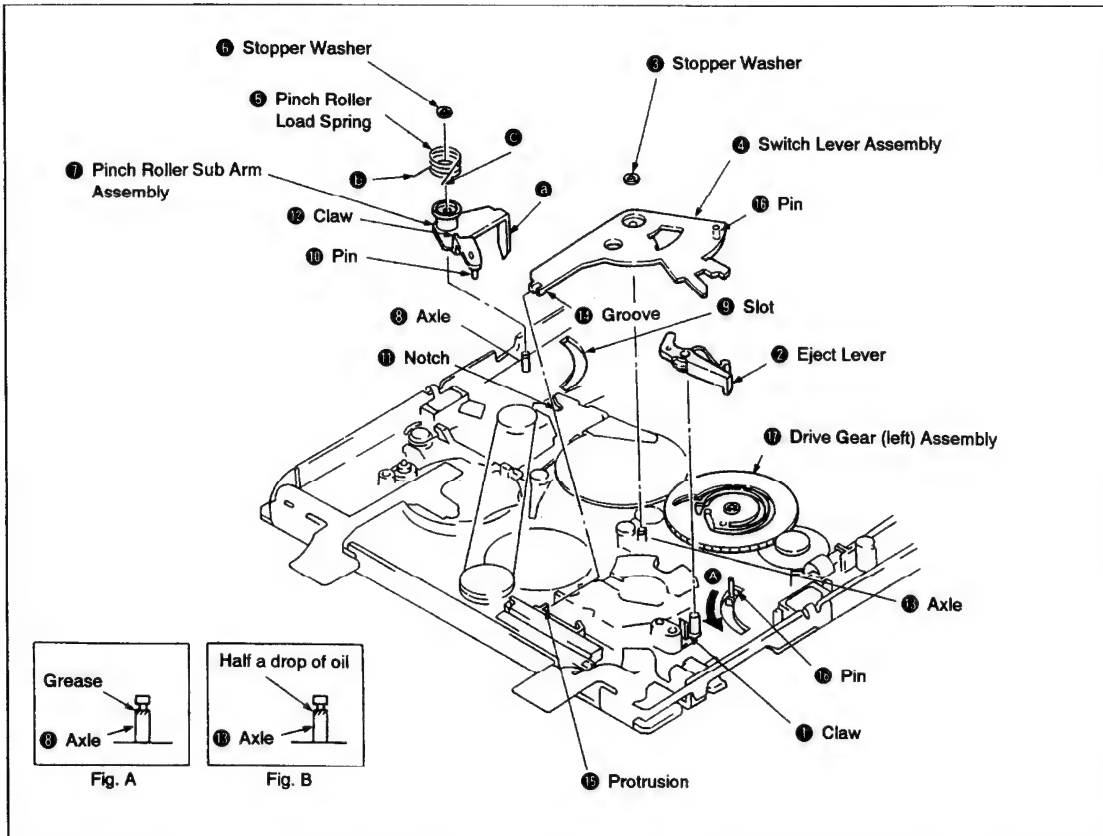


Fig. 3-15.



### 3-15. TIMING BELT (L) , RC GEAR ASSEMBLY, LOADING LEVER ASSEMBLY, TIMING BELT (S), CONNECTING GEAR ASSEMBLY

#### 1. Removal (See Fig. 3-16.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the pinch roller sub arm assembly as described in section 3-14.
- 3) Set the **STOP** mode.
- 4) Remove the stopper washer ①, then remove the RC gear assembly ② from the axle ④ with the timing belt (L) ③ attached.
- 5) Remove the timing belt (L) ③ from the idler pulley assembly ⑤.
- 6) Remove the stopper washer ⑥ and remove the loading lever assembly ⑧ while pushing the claw ⑦ in the direction of the arrow A.
- 7) Turn the stopper ⑨ approx. 90° in the direction of the arrow B.
- 8) Remove the connecting gear assembly ⑪ from the axle ⑩ with the timing belt (S) ⑩ attached.
- 9) Remove the timing belt (S) ⑩ from the idler pulley assembly ⑤.

**Note:** When removing the connecting gear ⑪, take care not touch the flange section ⑬.

#### 2. Installation (See Fig. 3-16.)

- 1) Apply half a drop of oil to the axle ⑩ (See Fig. F).
- 2) Hook one end of the timing belt (S) ⑩ onto the connecting gear assembly ⑪ and the other end onto gear ④ of the idler pulley assembly ⑤. (Refer to the figure.)
- 3) Mount the connecting gear assembly ⑪ with the timing belt (S) ⑩ attached to the axle ⑩.
- 4) Turn the stopper ⑨ in the direction of the arrow C as far as it will go.
- 5) Apply half a drop of oil to the axle ⑫ (See Fig. A).
- 6) Fit the loading lever assembly ⑧ to the axle ⑫, secure the ⑬ part with the claw ⑦ and place the pin ⑬ into the groove of the drive gear (right) assembly ⑭.
- 7) Install the stopper washer ⑥.
- 8) Place the timing belt (L) ③ around the gears of the RC gear assembly ② indicated in Fig. B, and its opposite side around the gear ④ of the idler pulley assembly ⑤. (See Fig. E.)
- 9) Mount the RC gear assembly ② onto the axle ④ with the timing belt (L) ③ attached, and engage it with the gear of the RK gear assembly ⑮.
- 10) Install the stopper washer ①.
- 11) Grease parts of the loading lever assembly ⑧ indicated in Fig. C.
- 12) Mount the pinch roller sub arm assembly as described in section 3-14.
- 13) Mount the DC motor (capstan motor) as described in section 3-3.

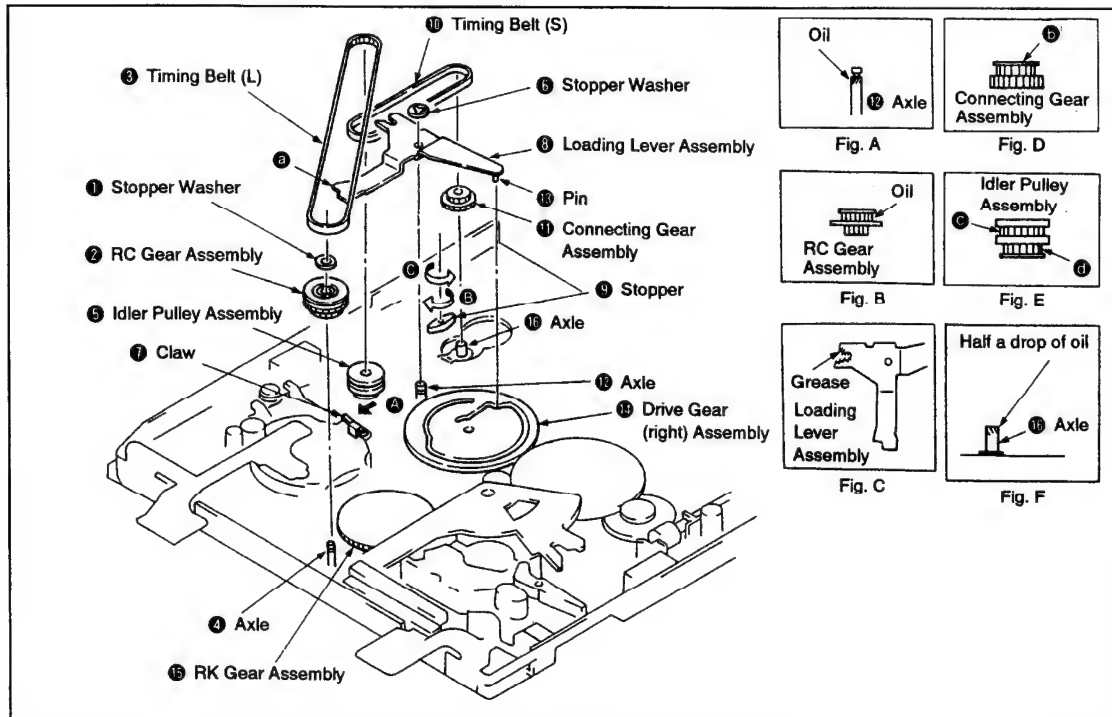


Fig. 3-16.

### 3-16. IDLER PULLEY, TS BRAKE ASSEMBLY, LB GEAR ASSEMBLY, RK GEAR ASSEMBLY

#### 1. Removal (See Fig. 3-17.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the switch lever assembly as described in section 3-14.
- 3) Remove the timing belt (L), the RC gear assembly, the loading lever assembly, the timing belt (S) and the connecting gear assembly described in section 3-15.
- 4) Set the **STOP** mode.
- 5) Remove the stopper washer ①, then remove the idler pulley ②.
- 6) Open the claw ③, then remove the TS brake assembly ④.
- 7) Remove the torsion coil spring (LB) ⑤.
- 8) Remove the stopper washer ⑥, then remove the LB gear assembly ⑦.
- 9) Remove the RK gear assembly ⑧.

**Note:** When removing the idler pulley ②, take care not to touch the flange section ②. (See Fig. C.)

#### 2. Installation (See Fig. 3-17.)

- 1) Apply half a drop of oil to the axle ⑨ (See Fig. A).
- 2) Mount the RK gear assembly ⑧ onto the axle ⑨, keeping it in horizontal position.
- 3) Apply half a drop of oil to the axle ⑩ (See Fig. B).
- 4) Mount the LB gear assembly ⑦ onto the axle ⑩ and secure it with the stopper washer ⑥.
- 5) Insert the torsion coil spring (LB) ⑤ into the axle ⑪, then hook it to the mechanism chassis notch ⑫ and to the tab ⑬.
- 6) Mount the TS brake assembly ④ and close the claw ③.
- 7) Apply half a drop of oil to the axle ⑬ (See Fig. D).
- 8) Mount the idler pulley ② onto the axle ⑬, then secure it with the stopper washer ①.
- 9) Mount the timing belt (L), the RC gear assembly, the loading lever assembly, the timing belt (S) and the connecting gear assembly as described in section 3-15.
- 10) Mount the switch lever assembly as described in section 3-14.
- 11) Mount the DC motor (capstan motor) as described in section 3-3.

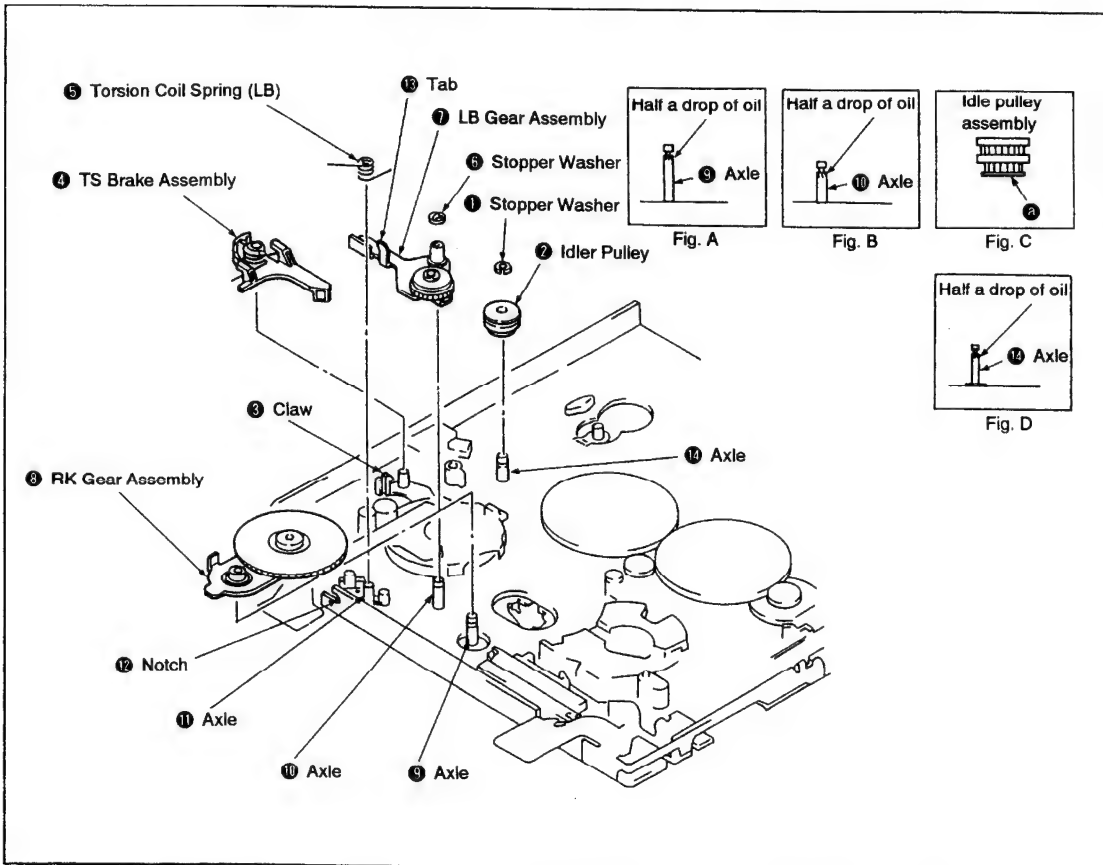


Fig. 3-17.

### 3-17. UL GEAR, UL BRAKE, UL ARM, LB PLATE SPRING

#### 1. Removal (See Fig. 3-18.)

- 1) Remove the switch lever assembly as described in section 3-14.
- 2) Remove the stopper washer ①, then remove the UL gear ②.
- 3) Remove the UL arm ③, the 1.6 mm-diameter poly washer ④ and the LB plate spring ⑤.
- 4) Remove the UL brake ⑥.

#### 2. Installation (See Fig. 3-18.)

- 1) Mount the UL brake ⑥.
- 2) Apply half a drop of oil to the axle ⑦ (See Fig. A).
- 3) Mount the LB plate spring ⑤ to the axle ⑦ as shown in Fig. B, then install the 1.6mm-diameter poly washer ④.
- 4) Mount the UL arm ③ to the axle ⑦ so that the protrusion ⑧ comes into the groove ⑨ of the UL brake ⑥.
- 5) Mount the UL gear ② to the axle ⑦ and engage it with the gear of the drive gear (left) assembly ⑩.
- 6) Install the stopper washer ①.
- 7) Mount the switch lever assembly as described in section 3-14.

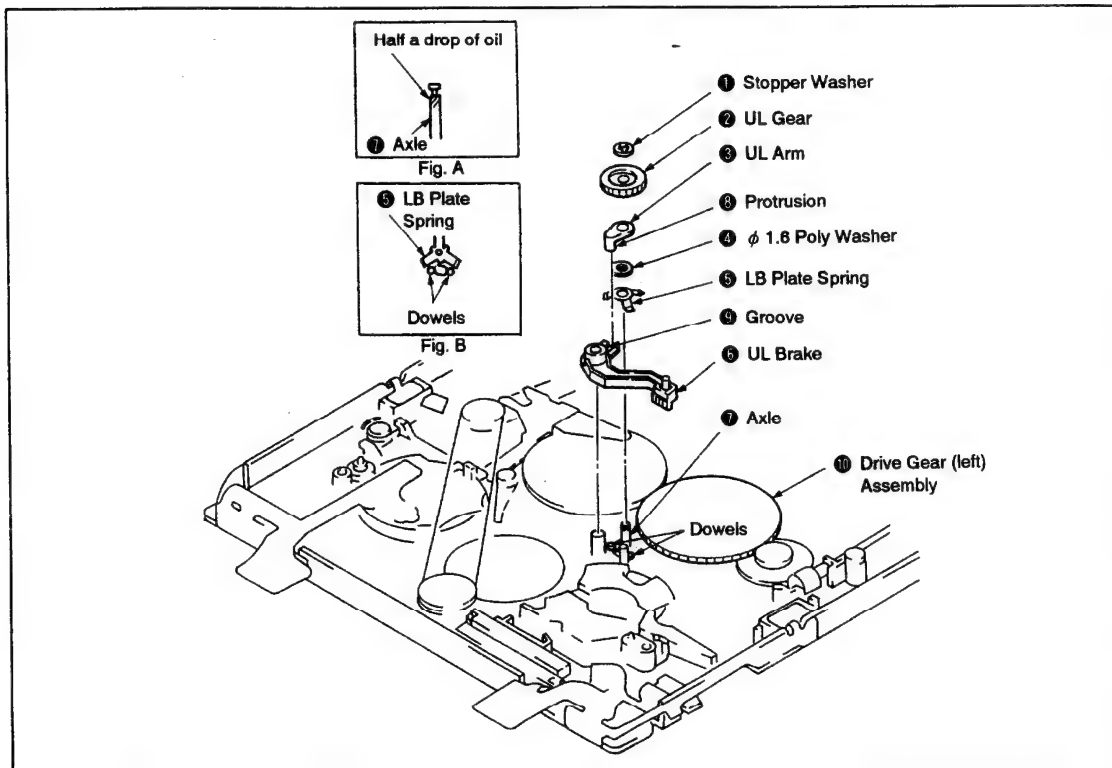


Fig. 3-18.

### 3-18. COASTER (RIGHT) ASSEMBLY, DRIVE GEAR (RIGHT) ASSEMBLY

#### 1. Removal (See Fig. 3-19.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the drum unit as described in section 3-13.
- 3) Remove the switch lever assembly as described in section 3-14.
- 4) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 5) Set the **STOP** mode.
- 6) Remove the screw ①, then remove the coaster plate spring ② and the coaster (right) assembly ③.
- 7) Remove the two screws ④, then remove the reinforcing plate TT ⑤.
- 8) Remove the stopper washer 1.5 ⑥, then remove the drive gear (right) assembly ⑦.

#### 2. Installation (See Fig. 3-19.)

- 1) Grease the points of the mechanism chassis shown in Fig. A.
- 2) Apply half a drop of oil to the axle ⑩ (See Fig. F).
- 3) Grease pin ⑨, axle ⑩ and dowel ⑪ of the coaster (right) assembly ③ (See Fig. D).
- 4) Mount by aligning the pin ⑨ and the axle ⑩ with the slot ⑪ of the mechanism chassis.
- 5) Move the brake release arm ⑫ in the direction of the arrow ⑬ to put it out of the way.

- 6) Mount the drive gear (right) assembly ⑦ to the axle ⑩, and engage it with the drive gear (left) assembly ⑧ as shown in Fig. B.
- 7) Align the ⑨ part with the ⑩ part, and the hole ⑪ with the pin ⑨ of the coaster (right) assembly ③.
- 8) Install the stopper washer 1.5 ⑥.
- 9) Mount by aligning the coaster plate spring ② with the axle ⑩ of the coaster (right) assembly ③ and pin ⑨, then secure with the screw ①.
- 10) Mount the reinforcing plate TT ⑤ aligning it with the dowel ⑪, then tighten the two screws ④ in the indicated order.
- 11) Grease the points indicated in Figs. C and E.
- 12) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 13) Mount the switch lever assembly as described in section 3-14.
- 14) Mount the drum unit as described in section 3-13.
- 15) Mount the DC motor (capstan motor) as described in section 3-3.

**Note:**

- Screw ① should be tightened with a tightening torque of approx. 500g\*cm. If tightened too much, the coaster (right) assembly ③ and the coaster plate spring ② will be deformed.
- After installing, be sure to perform tape path adjustment as described in section 4.

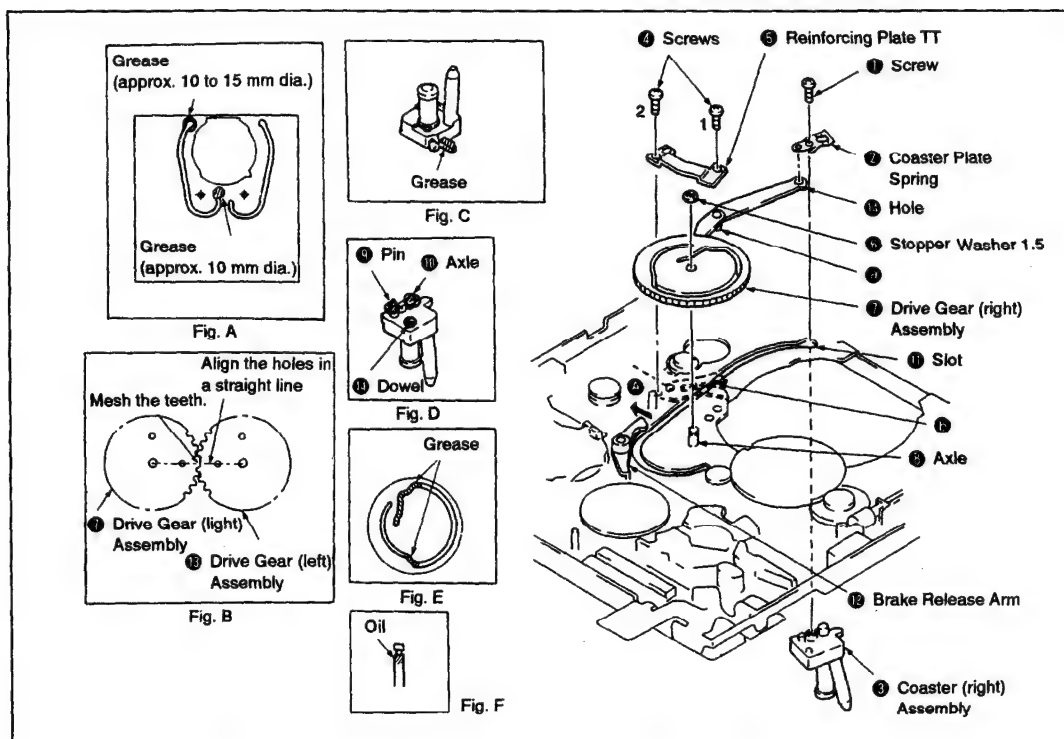


Fig. 3-19.

### 3-19. COASTER (LEFT) ASSEMBLY, DRIVE GEAR (LEFT) ASSEMBLY

#### 1. Removal (See Fig. 3-20.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the drum assembly as described in section 3-13.
- 3) Remove the switch lever assembly and the pinch roller sub-arm assembly as described in section 3-14.
- 4) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 5) Remove the coaster (right) assembly and the drive gear (right) assembly as described in section 3-18.
- 6) Remove the screw ①, then remove the coaster plate spring ② and the coaster (left) assembly ③.
- 7) Remove the two screws ④, then remove the reinforcing plate SS assembly ⑤.
- 8) Remove the stopper washer 1.5 ⑥, then remove the drive gear (left) assembly ⑦.

#### 2. Installation (See Fig. 3-20.)

- 1) Grease the points of the mechanism chassis shown in Fig. A.
- 2) Apply half a drop of oil to the axle ⑧ (See Fig. E).
- 3) Grease pin ⑨, axle ⑩ and dowel ⑪ of the coaster (left) assembly ③ (See Fig. B).
- 4) Mount by aligning the pin ⑨ and the axle ⑩ with the slot ⑪ of the mechanism chassis.
- 5) Fit the drive gear (left) assembly ⑦ to the axle ⑧, and mount so that the gear engages with the wheel gear ⑫ and the UL gear ⑬.

- 6) Align the ⑬ part with the slot ⑪, and the hole ⑭ with the pin ⑨ of the coaster (left) assembly ③.
- 7) Install the stopper washer 1.5 ⑥.
- 8) Mount by aligning the coaster plate spring ② with the axle ⑩ and pin ⑨ of the coaster (left) assembly ③, then secure with the screw ①.
- 9) Mount the reinforcing plate SS assembly ⑤ aligning it with the dowel ⑪, then tighten the two screws ④ in the indicated order.
- 10) Grease points indicated in Figs. C and D.
- 11) Mount the coaster (right) assembly and the drive gear (right) assembly as described in section 3-18.
- 12) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 13) Mount the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
- 14) Mount the drum assembly as described in section 3-13.
- 15) Mount the DC motor (capstan motor) as described in section 3-3.

**Note:**

- Screw ① should be tightened with a tightening torque of approx. 500g·cm. If tightened too much, the coaster (right) assembly ③ and the coaster plate spring ② will be deformed.
- After installing, be sure to perform tape path adjustment as described in section 4.

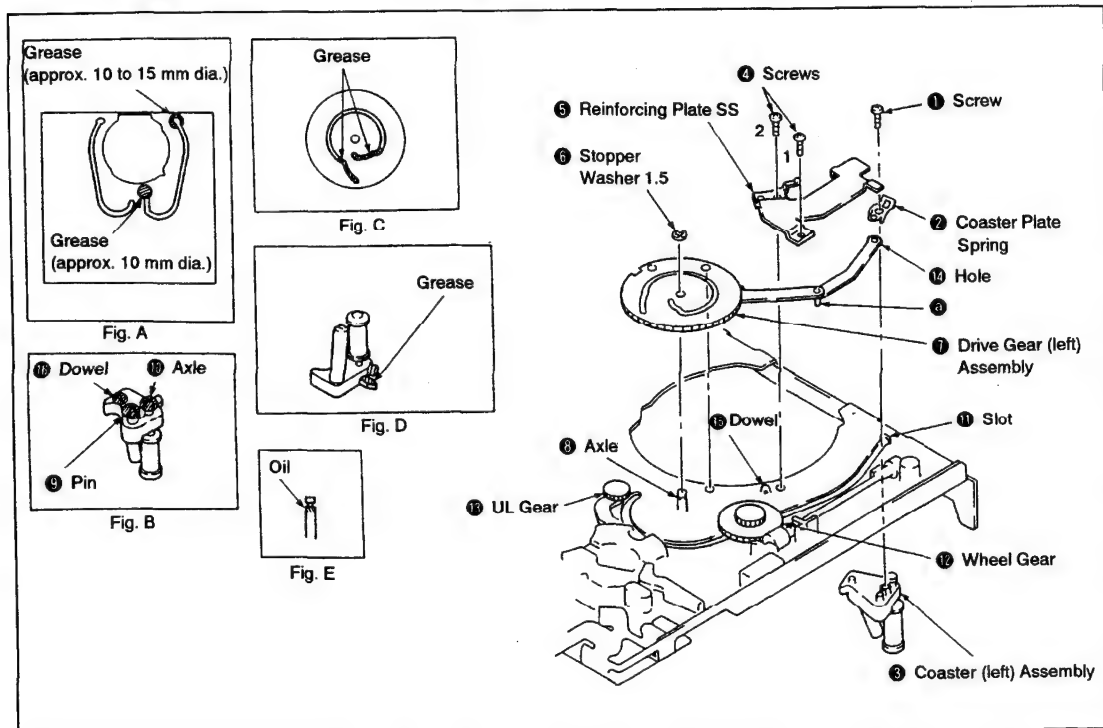


Fig. 3-20.



### 3-20. LOADING MOTOR, BRAKE RELEASE ARM, WHEEL GEAR, WORM ASSEMBLY

#### 1. Removal (See Fig. 3-21.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
- 3) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 4) Remove the drive gear (right) assembly as described in section 3-18.
- 5) Remove the drive gear (left) assembly as described in section 3-19.
- 6) Remove the two screws ①, then remove the loading motor assembly ②.
- 7) Remove the brake release arm ③.
- 8) Remove the stopper washer ④, then remove the wheel gear ⑤.
- 9) Remove the worm assembly ⑥ from the six claws ⑦.

#### 2. Installation (See Fig. 3-21.)

- 1) Mount the worm assembly ⑥, matching it to the six claws ⑦.
- 2) Grease the shaded parts of the worm assembly ⑥ (five places) (see Fig A).
- 3) Apply half a drop of oil to the axle ⑧ (See Fig B).
- 4) Fit the wheel gear ⑤ to the axle ⑧ and engage it with the gear of the worm assembly ⑥.
- 5) Mount the brake release arm ③.
- 6) Grease the whole perimeter of the gear of the loading motor assembly ②.
- 7) Align the loading motor assembly ② with the mechanism chassis and secure it with the two screws ①.
- 8) Mount the drive gear (left) assembly as described in section 3-19.
- 9) Mount the drive gear (right) assembly as described in section 3-18.
- 10) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 11) Mount the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
- 12) Mount the DC motor (capstan motor) as described in section 3-3.

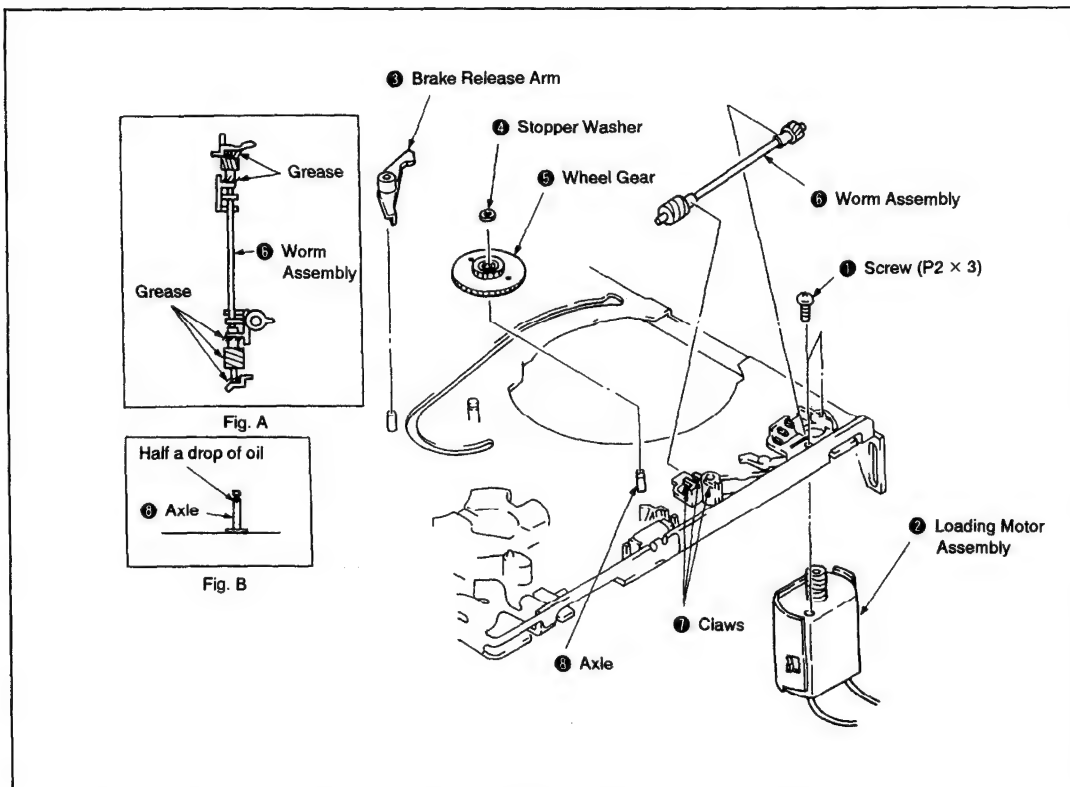


Fig. 3-21.

### 3-21. ROTARY UPPER DRUM REPLACEMENT

#### 1. Removal

- If possible, make a recording before removal.
- 1) Detach the six solderings ④, then use a pair of tweezers or the like to confirm that the terminals passing through the board holes from below can move freely.
- 2) Remove the two screws ① (See Fig. 3-22).
- 3) Mount the jig ④ (Ref. No. J-7) with the two supplied screws ②, then screw the attached hexagon socket screws ③ to the jig ④. The rotary upper drum ⑤ will move upward and come off (See Fig. 3-23).

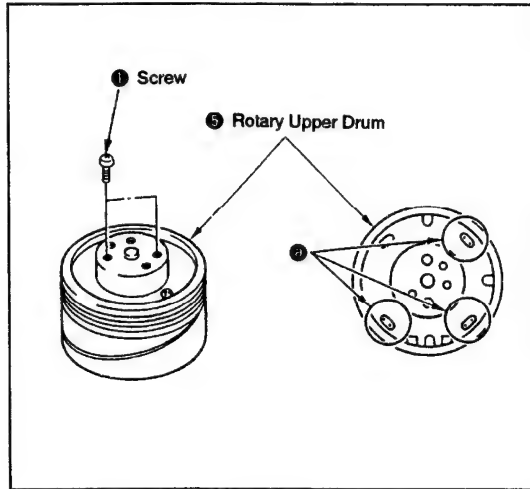


Fig. 3-22.

#### 2. Installation

- 1) Wipe clean the flange surface and the rotary upper drum ⑤ surface that makes contact with it, and confirm that they are free from dirt and scratches.
  - 2) Insert the jig ④ (Ref. No. J-7) into the drum positioning hole, then set the rotary upper drum ⑤ by passing the jig through its positioning hole ⑥.
- Note:** Confirm that the terminals ⑧ protrude slightly from the rotary upper drum board holes (See Fig. 3-24).
- 3) Remove the jig ④ and push down the rotary upper drum ⑤ gently by hand. If it does not go all the way down, secure it temporarily by tightening the two hexagon socket screws ③ alternately.
  - 4) Insert the jig ④ into the positioning hole ⑥ again and confirm that it goes in smoothly. If it does not, loosen the two screws ③, repeat step 3 of the Removal paragraph and restart the setting procedure.
  - 5) Tighten the screws ③.
  - 6) Solder the terminals ⑧ (⑧ in Fig. 3-22).

**Note:** Take care that no solder flows below the board.

**Note:** After installing, be sure to perform tape path adjustment as described in section 4.

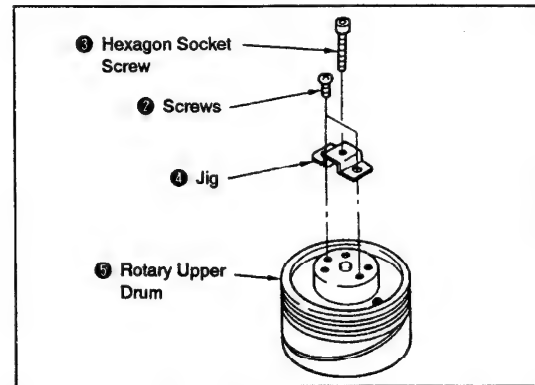


Fig. 3-23.

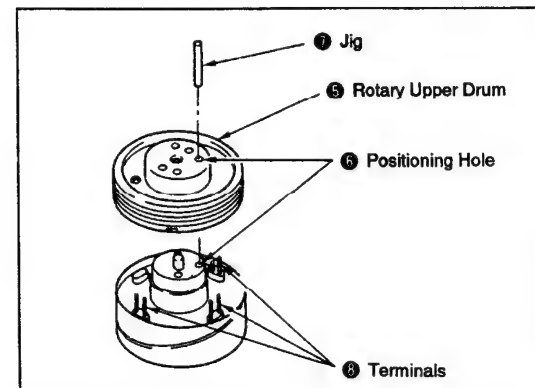


Fig. 3-24.

### 3-22. FWD BACK TENSION (See Fig. 3-25.)

- 1) Set the torque cassette (Ref. No. J-6).
- 2) Set the FWD mode and confirm that S reel table torque value is within 9 to 13 g\*cm.
- 3) If the torque value does not meet the specification, adjust the adjust arm ①.

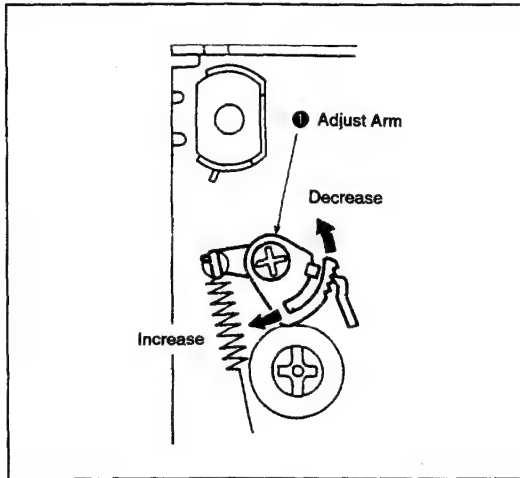


Fig. 3-25.

### 3-23. REEL TORQUE CHECK

- 1) Set the torque cassette.
- 2) Set the FWD mode and confirm that T reel table torque value is within 7 to 15 g\*cm.
- 3) Set the REV mode and confirm that S reel table torque value is within  $29 \pm 6$  g\*cm.
- 4) Set the REV mode and confirm that T reel table torque value is within 13 to 25 g\*cm.
- 5) If a torque value does not meet the specifications above, replace the corresponding reel table.

## 4. TAPE PATH ADJUSTMENT

### [The Track Shift Mode]

In the 8 mm video system, instantaneous tape speed control is performed using four kinds of pilot signals, and high-precision tracking is achieved through the ATF (Automatic Track Finding) system. This makes a tracking control knob unnecessary and allows for precise tracing.

On the other hand, however, tape path adjustment presents some difficulties when the ATF system is used. Namely, since the ATF system will automatically compensate to some degree for head tracing errors, thorough adjustment is not possible.

This can be solved by setting the track shift mode for tracking fine adjustment. ATF will be compulsorily activated, shifting the tracking amount by a fixed amount (approx. 1/4) and thus making tracking fine adjustment easy. Furthermore, no track shift jigs are required.

## 4-1. TRACK SHIFT MODE SETTING

### [Setting Procedure]

- Connect the TEST A and TEST B terminals to the COM terminal.

Example:

NTSC ..... GV-8

PAL ..... GV-8E

Connect Pins ① and pin ③ of CN017 on the  
{ SV-34 board (GV-8) } to pin ② of it. (See Fig. 4-1)  
{ SV-35 board (GV-8E) }

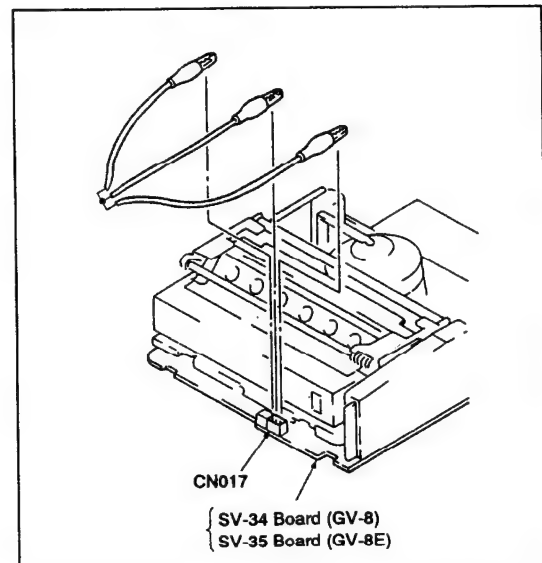


Fig. 4-1.

**[Note on Adjustment of No.7 Guide (TG-7)]**

The height adjustment screw for No.7 guide (TG-7) is located at some distance from the guide (refer to Fig. 4-2).

Therefore, when performing section 4-6. No.7 Guide (TG-7) Adjustment it is convenient to use the alignment tape for tracking (Ref. No. J-5), modified as follows, and perform adjustment in playback mode.

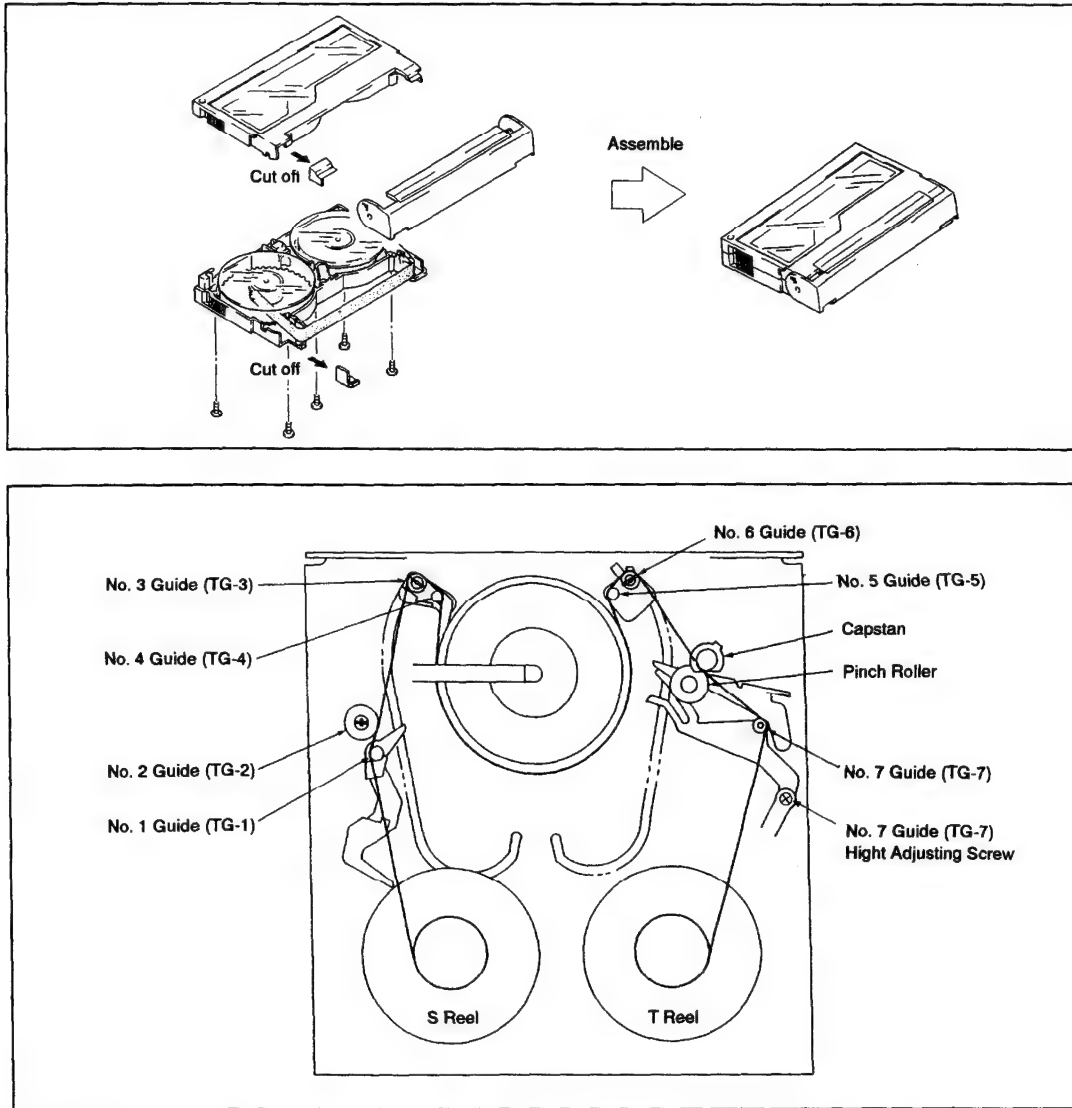


Fig. 4-2.



## 4-2. PREPARATIONS FOR ADJUSTMENT

- 1) Clean tape path surfaces (tape guides, drum, capstan shaft, pinch roller) (See Fig. 4-2).
- 2) Connection of oscilloscope and output method of waveform.

CH 1: RF signal output of the drum head (V RF OUT)

Method for signal output:

Short-circuit the external trigger output (RF SW. P) and GND.

Example:

NTSC ..... GV-8

PAL ..... GV-8E

CH 1: Pin ③ (V RF OUT) of CN018 on the

{ SV-34 board (GV-8)

{ SV-35 board (GV-8E)

Method for signal output:

Short-circuit pin ① (GND) and pin ② (RF SW.P)

of CN018 on the

{ SV-34 board (GV-8)

{ SV-35 board (GV-8E)

- 3) Play back the alignment tape for tracking adjustment (Ref. No. J-5).
- 4) Confirm that both the entrance and exit side RF waveforms of the oscilloscope are flat (See Fig. 4-4). If they are not, adjust as follows.

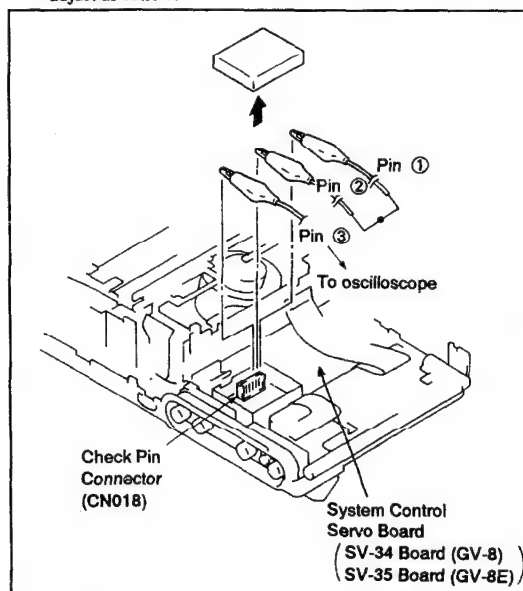


Fig. 4-3.

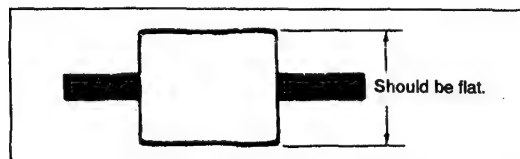


Fig. 4-4.

## 4-3. TRACKING ADJUSTMENT (See Fig. 4-5.)

- 1) Play back the alignment tape for tracking adjustment.
- 2) Pass a hexagonal wrench, screwdriver (Ref. No. J-11) or the like through the hole ①, loosen the lock screw ② a little, then make the entrance side waveform flat by turning the No. 3 guide (TG-3) ③.
- 3) Pass a hexagonal wrench, screwdriver or the like through the hole ④, loosen the lock screw ⑤ a little, then make the exit side waveform flat by turning the No. 6 guide (TG-6) ⑥.

**Note:** Take care not to loosen lock screws too much, since guides come loose easily.

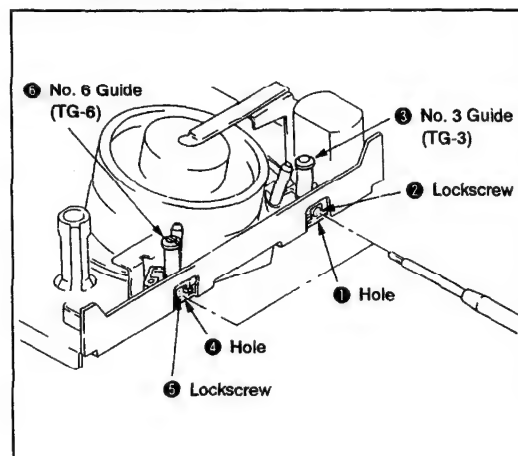


Fig. 4-5.

#### 4-4. TRACKING FINE ADJUSTMENT (See Figs. 4-5. and 4-6.)

- 1) Play back the alignment tape for tracking adjustment and set the track shift mode.
- 2) Confirm whether the waveform is flat. If it is not, turn the No. 3 (TG-3) and No. 6 (TG-6) guides so that it becomes flat.
- 3) Fix the No. 3 guide ③ by tightening its lock screw ②. Then confirm that the entrance side waveform has not changed.
- 4) Fix the No. 6 guide ⑥ by tightening its lock screw ⑤. Then confirm that the exit side waveform has not changed.

**Note:** The set screws ② and ⑤ should be tightened with a tightening torque of approx.  $200\text{g}\cdot\text{cm} \pm 10\%$ . If tightened too much, there is danger of damaging the thread.

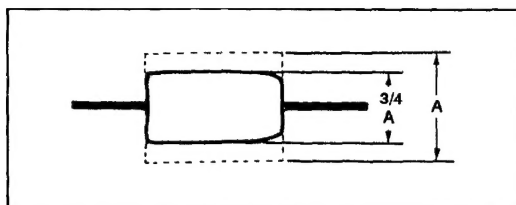


Fig. 4-6.

#### 4-5. No. 2 GUIDE (TG-2) ADJUSTMENT

When the No. 2 guide has been turned or replaced, perform height presetting before this adjustment.

##### 4-5-1. No. 2 Guide (TG-2) Height Presetting (See Fig. 4-7.)

- 1) Adjust the height from the mechanism chassis upper surface to the TG-2 upper flange ① upper surface to 18.6 mm by rotating the TG-2 upper flange ①.

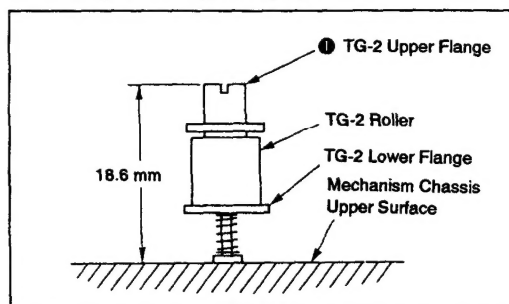


Fig. 4-7.

#### [Reference]

This U mechanism is equipped with four adjustable guides (TG-2, 3, 6 and 7). To raise or lower the respective guide rotate the corresponding adjustment screw as shown below.

Guide	Guide adjustment	Rotating direction of adjustment screw
TG-2, 3, 6	Raise	Counterclockwise
	Lower	Clockwise
TG-7	Raise	Counterclockwise
	Lower	Clockwise

#### 4-5-2. No. 2 Guide (TG-2) Adjustment (See Figs. 4-8. and 4-9.)

- 1) Play back a thin tape like the P6-120MP, etc. and set the REV mode.
  - 2) Confirm that the tape is not bent at the lower flange ② of the No. 2 guide (TG-2) ① (See Fig. 4-8). If it is, turn the upper flange ③ of the No. 2 guide (TG-2) ① clockwise with a screwdriver, lowering it until the tape is straightened.
  - 3) Play back the alignment tape for tracking adjustment.
  - 4) Perform tracking adjustment and tracking fine adjustment as described in sections 4-3. and 4-4.
  - 5) In the track shift mode, CUE/REV the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds.
  - 6) If the waveform is not normal (See Fig. 4-9), turn the upper flange ③ of the No. 2 guide (TG-2) ① 90° counter-clockwise and repeat step 5.
- Repeat steps 5 and 6 until a normal waveform is obtained. Then, confirm that the tracking waveform has not changed. If it has, perform fine adjustment of entrance side tracking and repeat step 5.

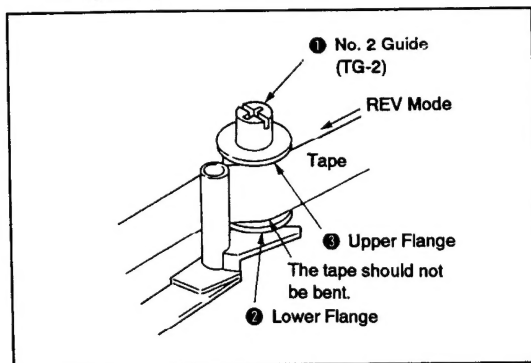


Fig. 4-8.

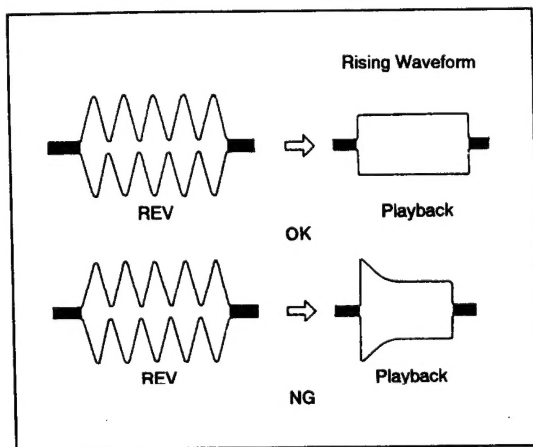


Fig. 4-9.

#### 4-6. No. 7 GUIDE (TG-7) ADJUSTMENT (See Fig. 4-10.)

- 1) Play back the alignment tape for tracking adjustment and set the REV mode.
- 2) Confirm that the tape is not bent between the No. 6 guide (TG-6) ① and the capstan ②. If it is, turn the height adjusting screw ④ of the No. 7 guide (TG-7) ③ until the tape is straightened.
- 3) Set the playback mode again and confirm that the tape is not bent between the capstan ② and the height adjusting screw ④ of the No. 7 guide (specification: 0.5 mm or less). If the tape is bent beyond the specification, turn the No. 7 guide (TG-7) ③ until bending is within the specification (0.5 mm). If in the REV mode tape bending between the No. 6 guide (TG-6) ① and the capstan ② is 0.3 mm or less, adjustment can be considered completed.

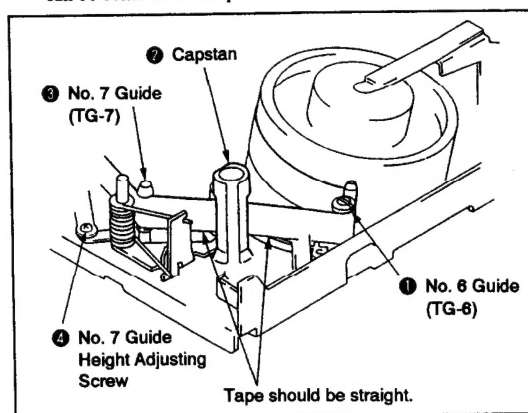


Fig. 4-10.

#### 4-7. CUE AND REV WAVEFORM CHECK (See Fig. 4-11.)

- 1) Play back the alignment tape for tracking adjustment and set the REV mode. Confirm that waveform peaks maintain a constant pitch of 5 seconds or more (See Fig. 4-11). In case pitch is not constant, perform section 4-4. Tracking Fine Adjustment and section 4-6. No. 7 Guide Adjustment.
- 2) Set the CUE mode. Confirm that waveform peaks still maintain a constant pitch of 5 seconds or more (See Fig. 4-11). Otherwise, perform section 4-4. Tracking Fine Adjustment.

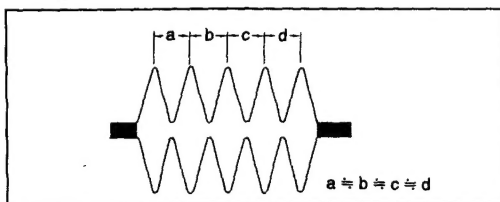


Fig. 4-11.

#### 4-8. CHECK AFTER ADJUSTMENT

##### 4-8-1. Tracking Check

- 1) Confirm that the amplitude of RF waveform is reduced to approx. 3/4 when the track shift mode is set (See Fig. 4-12).
- 2) Then, confirm that the minimum amplitude value (EMIN) is 65% of the maximum value (EMAX) or larger (See Fig. 4-13).
- 3) Confirm that no large fluctuations occur on the waveform (See Fig. 4-14).

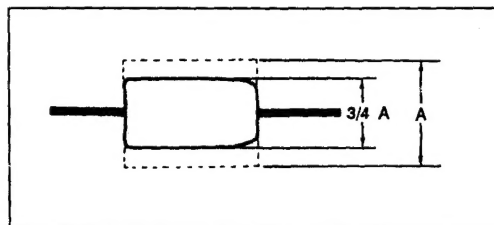


Fig. 4-12.

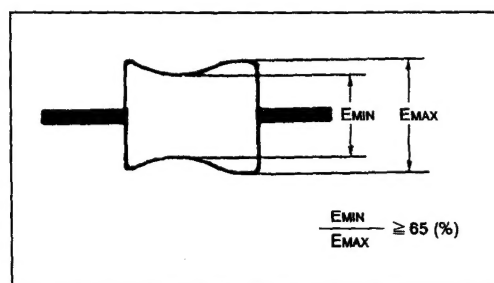


Fig. 4-13.

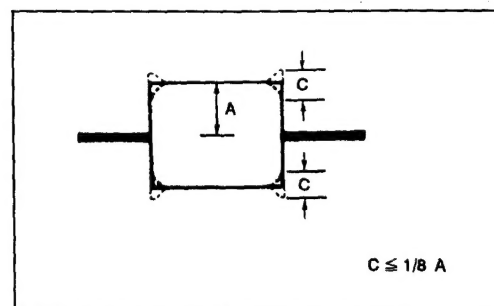


Fig. 4-14.

#### 4-8-2. Rising Check (See Fig. 4-15.)

- 1) Play back the alignment tape for tracking adjustment.
- 2) Cancel the track shift mode.
- 3) Eject the tape, then load it again.
- 4) Set the playback mode and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller (See Fig. 4-15).
- 5) CUE/REV and FF/REW the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller.
- 6) Repeat steps 3) to 5) once more.

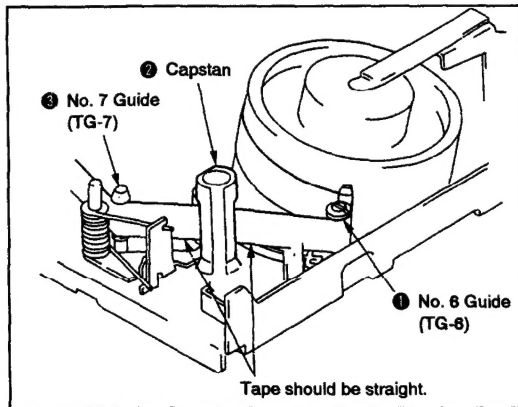


Fig. 4-15.

#### 4-8-3. Tape Path Check (See Fig. 4-16.)

- 1) Play back a thin tape like the P6-120MP (NTSC) or P5-90MP (PAL), etc. and confirm that no tape rising occurs, and that curling is less than 0.3 mm, at the lower flange of the No. 2 guide, the upper flange of the No. 3 guide, the upper flange of the No. 6 guide and the No. 7 guide upper and lower flanges.
- 2) Confirm that no tape rising occurs and that curling is less than 0.3 mm at the flanges of all guide when pressing the FF button in the playback mode to set the CUE mode, or the REW button to set the REV mode.

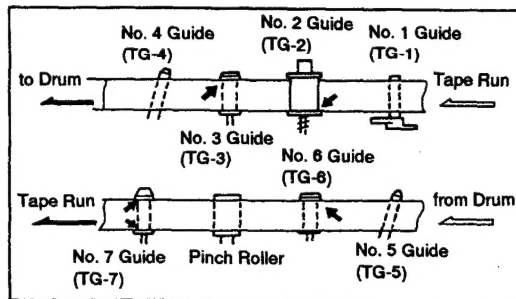


Fig. 4-16.